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Management study of Skyway Roofing Co., Inc., Troy, New York

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Troy, New York; Rensselaer Polytechnic Institute

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MANAGEMENT STUDY OF SKYWAY ROOFING CO., INC. TROY, NEW YORK.

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TROY, NEW YORK

MANAGEMENT STUDY OF
SKYWAY ROOFING CO., INC.
TROY, NEW YORK

by

THE NAVY MANAGEMENT GROUP
IN THE
MANAGEMENT ENGINEERING PROGRAM

JUNE 1964

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FOREWORD

This report represents the collective observations opinions and recommendations of the 'Navy Management Group' of the School of Management, Rensselaer Polytechnic Institute, Troy, New York, concerning Skyway Roofing Co., Inc., and Skyway, Inc., Troy, New York (hereinafter referred to as Skyway Roofing and Skyway, Inc. respectively and collectively as Skyway). The study was made during the period February 1964 to May 1964, inclusive, at the request of Louis R. Colangione, part owner and Vice President of both companies.

Initially, the study was to have been completed in eight weeks, however, Skyway was experiencing both a substantial increase in sales and in expansion of their marketing area which, if continued, would tax the ability of the existing organization to cope with the increased complexity caused by widespread operations. There was a desire by Skyway's management to re-organize the companies such that they could effectively deal with generally expanded operations in the foreseeable future. Thus, at the request of Skyway's management and with the approval of the School of Management at R.P.I., the study was extended. The additional time made it possible to conduct a more detailed study and, on the basis of this study, to make concrete recommendations concerning the organization, policies, and procedures of both companies which, in our opinion, would assure efficient and effective coordination of widespread sales branches and project units.

At the very outset the study group was made aware of the realization on the part of management that an improvement of the existing organization, policies and procedures was needed. It was also apparent that all major functions were in the hands of one man who was, in effect, the general manager and chief administrator of both companies. All decisions including relatively minor ones were being made at the top. Because of this and the exigencies of the business, it had become extremely difficult for one man, despite his exceptional capabilities, to effectively coordinate all aspects of the business. As a result, some delegation of authority was made and some policies and procedures were changed. However, it was noted, that many of these changes covered ad hoc situations. It became apparent that a reorganization of both companies was needed such that top management could concern itself with broad planning, direction, coordination, and control - and be freed from matters that could be handled by others. In addition, policies and procedures which heretofore had not been clearly delineated and delimited were to be specified and established to guide all aspects of the companies' operations. It is hoped that the Skyway management has been assisted by our recommendations in this report, if only to serve as a comparison with their own independent self appraisals.

It is pertinent to point out that during the course of this study, organizational, procedural, and personnel changes in both companies were made quite frequently. Also, it was necessary, in order to meet a firm date of publication, to establish a cut-off date for our observations. Therefore, this study depicts

the existing conditions of both companies as of mid-April 1964. Our final recommendations have been based upon the overall objectives of the companies as we understood them to be at that time.

We appreciate greatly the outstanding cooperation given to us by all the personnel at Skyway Roofing Co., Inc., and Skyway, Inc. We were given almost complete access to the files and records of the business and were very well received by all with whom we came in contact. We also gratefully acknowledge the guidance and assistance given to us by Professor Dale S. Beach of the School of Management at Rensselaer Polytechnic Institute.

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PART 1

GENERAL

This part of the report is divided into two chapters.

Chapter I contains an outline of background information pertinent to both Skyway Roofing Co., Inc., and Skyway, Inc. The history of these companies is discussed in the first section to give the reader a feeling for the growth of the business since its inception in 1948. In the second section the current operations are summarized. In the third section the overall objectives of the business are specified.

Chapter II contains a discussion of both the existing and recommended organizations. An attempt has been made to present general overviews of the organizations with the use of organization charts and a delineation of functions as they appeared and as they are proposed. The functions then are broken down into detailed job descriptions.

PART 1

CHAPTER I

BACKGROUND

1.1 History

Skyway Roofing Co., Inc., and Skyway, Inc., had their inception in 1948 when Louis J. Colangione, as an independent entrepreneur, established Skyway Roofing to offer roofing repair and re-roofing service for residential and small commercial customers in the Troy-Watervliet, New York area. From 1948 to 1959, the business remained basically a locally operated, family-owned enterprise relying solely on local clientele. Services offered by 1959 included repairs to chimneys, gutters, flashing and miscellaneous exterior repairs. During the latter part of this period, yearly sales volume averaged $50,000 to $65,000.

In 1956 the business was incorporated and renamed Skyway Roofing Co., Inc. Louis R. Colangione joined the business in 1959 as Vice President and, along with his parents, Mr. and Mrs. Louis J. Colangione, who were president and secretary-treasurer respectively, served as owner-manager. Shortly thereafter, the company embarked on a sales-oriented approach to marketing in an attempt to increase sales volume. Simultaneously its services were expanded in the area of re-roofing, exterior repairs, home additions and improvements. The Skyway Home Improvement Division was established to handle interior residential and small commercial repairs and in-

stallations. Advertising, which had been limited to small cuts in newspapers and the yellow pages, was expanded to include direct mailings and home show exhibits. By the end of 1959, sales volume had increased to double the average yearly sales volume of previous years.

During 1960, the marketing area was expanded to include the Albany area. A home improvement salesman was hired and additional advertising was instituted with radio and television announcements. In addition, Flintkote's monoform system, which is a method of spraying on a roof covering consisting of a fiber glass impregnated clay-type asphalt emulsion with pressurized spray apparatus, was adopted. This added the capability of accepting extensive roofing jobs beyond the residential and small commercial size. 1960's sales volume was triple that of the previous year.

Industrial re-roofing was added to the services of the business during 1961. During 1962, the service of installing roofing on large new construction was instituted and sales volume continued to increase. Additional clerical and administrative personnel were added. The business was separated into two different entities, Skyway Roofing Co., Inc., and Skyway, Inc. The former was to handle all industrial re-roofing and large new construction roofing while the latter was restricted to residential and small commercial roofing, exterior repairs, interior improvements and additions. Another distinction was that the former employed union labor and the

latter employed non-union labor. Still another difference was that Skyway Roofing, during 1962, began marketing in the Northeastern United States while Skyway, Inc., restricted its marketing to the Troy-Albany area.

During 1963, a branch office of Skyway Roofing was established at Boston, Massachusetts. In addition, direct mailings of advertising material were begun to approximately 7,500 industrial plants and large institutions. Additional advertising was placed in selected trade magazines. In addition to radio and newspaper ads, billboards were employed in the local area for Skyway, Inc. Sales volume of the business during 1963 increased over 1960's sales by 200 percent.

The growth of the business is apparently continually increasing at the time of this writing. In April of 1964 Skyway Roofing established another branch office at Waterbury, Connecticut. Skyway, Inc., during 1964 has expanded its marketing area with plans for branch offices in various other cities. In addition, Skyway, Inc., now has six salesmen canvassing the Albany-Troy-Schenectady area.

The tremendous growth of the business from June 1959 until the present day was accelerated by the sales-oriented approach instituted by Louis R. Colangione who, as Vice-President of both companies, is also the general manager and chief administrator of both. The business is still owned by the Colangione family. Louis J. Colangione who is designated as President, is chiefly engaged as a salesman for Skyway, Inc.

Mrs. J. Colangione is inactive in the business but remains as part owner. Personnel-wise the business grew from 5 management and administrative personnel plus an average of 10 workers in 1959 to its present size of 25 salaried personnel consisting of a central administrative and support unit (located on Woodward Avenue, Troy, New York), branch managers, salesmen, and job or project foremen. In addition, workers for Skyway, Inc., hired locally on an as-work-is-available basis, average 12 personnel. Workers for Skyway Roofing are usually hired at the job site from the membership of local construction trade unions, the number employed at any one time averaging 35 personnel.

The physical plant includes a building, previously the Colangione home, which was converted to offices in 1960, a sheetmetal shop, and a new 50' X 150' warehouse. Also, the business owns 19 trucks, 7 cars, 4 monoform tankers ranging in size from 5,000 to 6,500 gallon capacity, 1 box trailer, 4 compressors, 4 five-hundred gallon kettles, 4 sets of monoform-applying apparatus, miscellaneous equipment, and is part owner of a Cessna 195 aircraft. This is contrasted with total owned assets of 7 trucks and smaller miscellaneous roofing equipment in June of 1959. In addition, offices are maintained at Boston, Massachusetts, and Waterbury, Connecticut, for Skyway Roofing and at Glens Falls, New York, and Pittsfield, Massachusetts for Skyway, Inc.

Penetration advertising for both companies is being

continued through direct mailings, radio, newspapers, billboards, and selected trade magazines. The continued growth of both Skyway Roofing and Skyway, Inc., is virtually assured for the foreseeable future. The company has predicted a sales volume for 1964 of one and one quarter million dollars.

1.2 Summary of Current Operations

Skyway, Inc. is currently involved with residential and small commercial roofing and siding installation and repair and general home improvement work. The emphasis is being shifted from general home improvement work to roofing, siding and miscellaneous exterior installation and repair. The sales force has recently been increased to canvass the Albany-Schenectady-Troy area. In addition, branch offices are being established at Glens Falls, New York and Pittsfield, Massachusetts.

Skyway Roofing is primarily involved with industrial re-roofing and large new construction roofing and siding installation. The sales force consists of three salesmen operating out of the central office at Troy, New York in addition to branch office salesmen at Boston, Massachusetts and Waterbury, Connecticut. The marketing area has been designated as Northeastern United States including Eastern New York and Pennsylvania, all of New England, and New Jersey.

1.3 Objectives

Skyway's objectives can generally be summarized as continued growth within the Northeastern United States through

modern marketing techniques. Following is a listing of the specific objectives.

1. Organize a central administrative and support unit which will encompass both Skyway Roofing and Skyway, Inc. in order to give guidance to and control effectively the expanded and widespread operations due to an increasing volume of sales in the foreseeable future.

2. Identify Skyway Roofing with reliable service and a high degree of excellence by offering a better roofing product and other exterior construction and repairs at an acceptable price, and to establish a strong competitive position through modern methods of marketing and through the application of modern management techniques.

3. Firmly establish Skyway Roofing as a leading competitor in the construction industry in the Northeastern United States, including New England, Eastern New York, Pennsylvania, and New Jersey with emphasis on industrial re-roofing and large new construction involving roofing and siding.

4. Continue expansion of Skyway Roofing in the chosen marketing area by the establishment of branch offices in Boston, Massachusetts, and Waterbury, Connecticut.

5. Expand the operations of Skyway, Inc., within the local marketing area of Albany, Schenectady, and Troy by employing a larger sales force and establish branch offices beyond the local area as the opportunity permits.

6. Shift the emphasis of Skyway, Inc., from general home improvements to limited remodeling in the residential and small commercial area involving roofing, siding, and miscellaneous exterior repairs and construction.

PART 1

CHAPTER II

ORGANIZATION

2.1 General

A stable organization is probably the key to Skyway's continued growth and success. As noted in the foreword, the management of Skyway has been aware of the need for reorganization. Recent changes in personnel, functions, and some policies have been many and varied. These changes have created some difficulty in the stabilization and definition of the functions that are to be performed by the personnel of both companies. This Chapter contains a general discussion of the existing organization in Section 2.2. A recommended organization and detailed functional job descriptions are presented in Section 2.3.

2.2 Existing Organization

Basically, the existing organization of Skyway can be described as "changing." Therefore, it is necessary to review what has transpired during the period of this study. In order not to duplicate material contained in later chapters of this report, this section will cover the top management functions in relative detail in addition to a general overview of the entire organization.

Until quite recently, practically all functions were accomplished by one individual, the Vice President of both Skyway Roofing and Skyway, Inc. As such, Skyway is basically

a one-man, owner-managed business. In addition, Skyway can be described as a small business which is outgrowing its one-man-manager category. Thus some of the characteristics of small business and small business management apply to Skyway.

The primary advantage to the owner-manager type of management is the tendency to expedite top management action. However, several disadvantages tending to imbalance this are:

1. Decisions are frequently made without the complete consideration of all aspects of a problem.

2. The manager may lack well-rounded experience, viewpoint and knowledge.

3. There is a tendency to overload the manager with minor details.

4. The manager is unable to handle satisfactorily all functions due to lack of time.

5. There is a failure to develop other personnel through a sharing of general management responsibility.

Another characteristic typical of the owner-manager is that he may be experienced in one function, generally either production or selling, and is likely to slight the other, as well as accounting, personnel, policy formation and similar activities. The Vice President of Skyway seems to fit this pattern. Although he is extremely capable and has a good grasp of all the functions, he is primarily sales-oriented. It is to his credit that he can perform all the other functions as well as he does. However, the usual result is "brush fire"

management. A typical example occurred late one Friday afternoon when it was decided that Monoform was to be applied on one of the industrial jobs the following Monday. The result was that the project manager and the accountant were constrained to disregard their regular duties in order to schedule a tanker loading, rent a tractor, and arrange for licensing and inspection of one of the tankers. Some delegation of authority to handle relatively minor activities such as the licensing and inspection of vehicles could have avoided most of the problems that arose.

The importance of time to the owner-manager is a major problem. There are many vital duties to perform, with only a minimum amount of time available for each. As a result, one man bears all the managerial responsibility without an assistant manager or an understudy. This is particularly true at Skyway. In order to relieve himself of a myriad of details the Vice President of Skyway did for a time hire a recent college graduate who became Project Manager and Central Office Manager. However, at this writing he has assumed the role of a consultant while the other two positions remain vacant with the functions variously split among the Vice President, Sales Manager for Skyway, Inc., and the Projects Superintendent for Skyway Roofing.

With Skyway's sales continuously increasing, time will become even more of a critical factor for the Vice President in the future. As the size of the business increases, greater

opportunities will arise to share responsibility and to specialize the management functions. However, managerial ability comes at a high price that in turn requires a large income-earning base or unusually good prospects for advancement. The Vice President realizes this and is taking steps to assure the application of modern management techniques which include:

1. A recognition of the need to delegate authority and share responsibility.

2. Taking advantage of all time savers: policies, organization, supervision, standard procedures, simple methods of reporting only essentials, and consulting top management only on unusual points - in general, application of the exception principle of management.

3. Advance planning and preparation, with adequate reminders and follow-up.

Recently, a Sales Manager for Skyway, Inc., was appointed. He will coordinate all sales efforts including those of branch offices. In addition, he is assisting the Vice President with advertising and temporarily scheduling jobs for Skyway, Inc. Also, a new man is being sought to fill the position of Project Manager for Skyway Roofing. Long range plans call for the branch offices to operate independently with only policy guidance from the central office at Troy, N.Y.

In general, the keystone of Skyway's organizational structure is the Vice President. Skyway's future depends almost wholly on his willingness to relinquish some managerial functions to his subordinates. He has moved in this direction

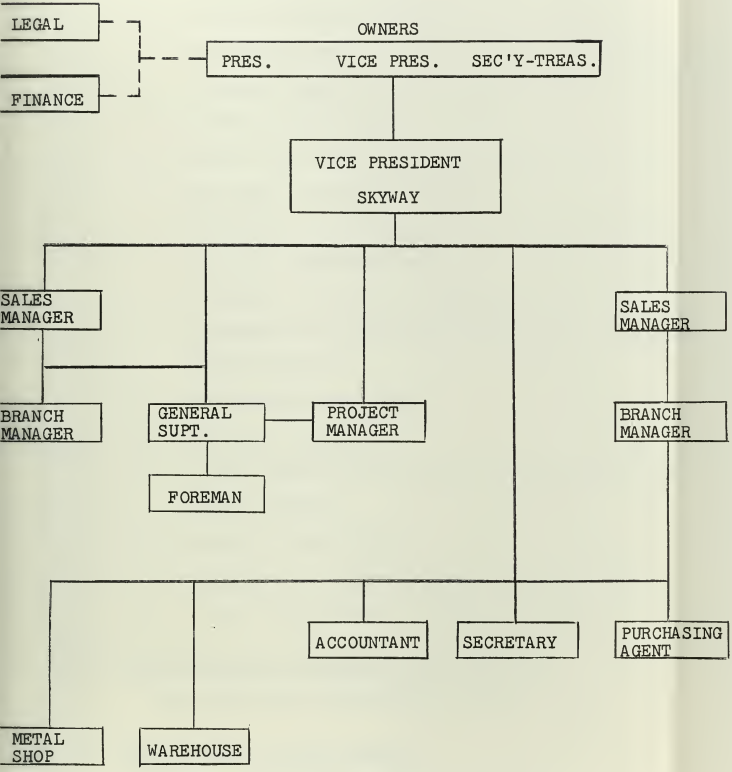
but much more must be done before he is freed of much trivia. Most important is the establishment of a firm organizational structure and definite policies and procedures to be used for continuing expansion. There is a danger that the business may expand too rapidly and over-extend the existing organization. In addition, capital expenditures used to create branch offices without first stabilizing the organization, policies, and procedures may lead to later financial difficulties.

An attempt has been made to chart the existing organization as shown on the following page. No formal structure as such exists and no attempt has been made to show informal lines of communications. It should be noted that although the owners of the business, indicated by the titles of President, Vice President and Secretary-Treasurer, are shown in an overall control function, only the Vice President is actively engaged in this function. The descriptions in the following paragraphs list the management functions as performed in the existing organization.

2.2.1

ORGANIZATION CHART

(Existing)



2.2.2 Vice President

1. Overall control of Skyway.
2. Legal function through lawyer on retainer.
3. Finance function through outside consultant.
4. General Manager for Skyway Roofing and Skyway, Inc.
5. Hiring, firing of all salaried personnel including central office staff.
6. Supervises office staff and all support units.
7. Salesman for Skyway Roofing.
8. Estimating and bidding on all new construction work for Skyway Roofing.
9. Planning, scheduling, purchasing on all new construction work and some industrial re-roofing for Skyway Roofing.
10. Advertising for Skyway.
11. Equipment purchases.
12. Direct supervision of Project Superintendent for Skyway Roofing.
13. Reviews "punch lists."
14. Approves all expenditures except petty cash.
15. Direct supervision of Branch Managers.

2.2.3 Project Manager and Central Office Manager

These positions are presently vacant.

2.2.4 Sales Manager, Skyway Roofing

1. Directs efforts of branch offices.

2. Salesman, estimator, and bidder on industrial re-roofing work.
3. Maintains sales records.
4. Assists Vice President with advertising.
5. Reviews estimates of all salesmen.

2.2.5 Sales Manager, Skyway, Inc.

1. Supervises all salesmen in Troy area.
2. Coordinates activities of branch offices.
3. Salesman and estimator for call-in work.
4. Schedules local work crews.
5. Assists Vice President with advertising.

2.2.6 Branch Manager, Skyway Roofing

1. Salesman in assigned area.
2. Maintains local office.

2.2.7 Branch Manager, Skyway, Inc.

1. Coordinates sales in assigned area.
2. Plans and schedules work and crews.
3. Hires local labor as necessary.
4. Maintains local office, warehouse, and equipment.

2.2.8 Project Superintendent, Skyway Roofing

1. Field superivsor of all projects.
2. Assistant project manager.

2.2.9 Foreman, Skyway Roofing

1. Supervises project on basis of manhour estimates.
2. Hires local labor as needed.

2.2.10 Foreman, Skyway, Inc.

1. Supervises job on basis of contract provisions.

2.2.11 Accountant

1. Bookkeeping functions for Skyway (monetary accounting).
2. Disbursing.
3. Customer billings.
4. Cost Accounting.

2.2.12 Purchasing Agent

1. Purchasing as per bill of materials.
2. Material and equipment control.
3. Clerical work and bookkeeping.
4. Assigns workmen to Skyway, Inc. jobs.

2.3 Recommended Organization and Job Descriptions

Generally, the recommended organization provides for the top manager to be relieved of many functions in order that he may devote all his time to direction, supervision, control, and coordination. In addition, a central administrative and support unit is predicated to coordinate the widespread operations and to separate the various functions of Skyway Roofing and Skyway, Inc. It should be noted that the recommended organization chart on the following page depicts functions

rather than individuals. At present, one individual could satisfactorily perform one or more of the functions. However, as Skyway continues to expand, it may be desirable to assign an individual responsibility for only one function. The chart thus represents a plan for present operations as well as for future growth. The remaining sections contain detailed job descriptions for each function depicted on the chart. Discussions concerning these functions are in Parts 1 through 4 of this report. A summary of recommendations is contained in Part 5 of this report.

2.3.1 Organization Chart (Recommended)

2.3.2 Board of Control

The Board of Control directs and advises the general managers of Skyway and is the top policy making and planning group. The owners of the company, acting in their respective capacities as President, Vice President and Secretary-Treasurer, will exercise primary control. The membership should also include the legal and financial advisors. The Board's duties should be:

1. Formulate objectives and policies which will guide and control the basic, long-range phases of Skyway's operations.

2. Approve plans for the borrowing of funds and control the utilization of funds for large capital outlays.

3. At least once a year review and approve the budgets and long-range plans of Skyway management.

2.3.3 Central Administration and Support

The central office staff at Troy, New York, functions under the supervision of the Central Office Manager as an administrative and support unit for Skyway. In addition to providing administrative and clerical services to top management, it provides support for all line and staff functionaries. The Central Administration and Support Unit is responsible for the coordination and control of the activities of the clerical, accounting, personnel, labor relations, advertising, and materials control sections.

Job descriptions for all the functions assigned to the Central Administration and Support Unit are contained in this section.

2.3.3.1

JOB TITLE: CENTRAL OFFICE MANAGER

I. Duties and Responsibilities

A. General

Coordinate and supervise the activities of the central office.

B. Specific

1. Overall responsibility for the clerical, accounting, personnel, labor relations, advertising, and materials control sections.

2. Maintain records and central files as required by line functions.

3. Assure that standardized procedures are being followed in the routing and handling of reports, contracts, and correspondence.

4. Administrative assistant to the GENERAL MANAGERS of Skyway Roofing and Skyway, Inc.

5. Overall responsibility for the maintenance of buildings and equipment assigned to the central office and support sections.

II. Job Relations

A. Reports to: GENERAL MANAGER of Skyway Roofing and GENERAL MANAGER of Skyway, Inc. in a staff capacity and to the Board of Control in a line capacity.

B. Reporting Subordinates:

1. Accounting

2. Personnel

3. Labor Relations

4. Clerical Staff

5. Advertising

6. Materials Control

C. Working Relations With:

1. SALES MANAGERS - in supplying administrative and clerical assistance, and coordinating requested advertising needs.

2. PROJECTS MANAGER - in supplying administrative and clerical assistance and supervising (1) the Accounting Section in the preparations of cost summaries, (2) the Materials Control Section in coordinating the requirements of materials and equipment at job sites and (3), the Labor Relations Section in assuring good union relations.

3. Branch Offices - as the central clearing house for all reports and correspondence and in coordinating support section assistance as requested.

4. All Skyway employees, in general - by setting personnel policies and reviewing personnel grievances.

III. Special Requirements

A. Work Requirements

Have experience or training in office management, industrial relations, and modern management techniques.

B. Education

College degree in Business Administration or Management.

2.3.3.2

JOB TITLE: ACCOUNTANT

I. Duties and Responsibilities

A. General

Plan and execute, with limited guidance, the accounting, budgeting, and financial policies and procedures of Skyway Roofing and Skyway, Inc.

B. Specific

1. Assist the CENTRAL OFFICE MANAGER in matters of financing and accounting as directed.

2. Provide the plans and designs for accounting policies and procedures that will provide management with data necessary to make timely decisions.

3. Maintain the accounting systems so that they are responsive to managerial and external requirements.

4. Coordinate, provide, and control technical financial and accounting training as required.

5. Establish such internal procedures as necessary to achieve the above.

6. Provide for procurement and training of subordinates as required.

7. Supervise the preparation of financial and managerial reports as required.

8. Assist the CENTRAL OFFICE MANAGER in the preparation and administration of all budgets.

9. Coordinate the securing of loans in the normal course of business.

II. Job Relations

A. Reports to: CENTRAL OFFICE MANAGER.

B. Reporting Subordinates:

1. Cost accounting
2. General Accounting
3. Bookkeeping

C. Working Relations With:

1. All personnel of the central administrative office.
2. PROJECTS MANAGER of Skyway Roofing.
3. SALES MANAGER of Skyway, Inc.
4. Financial advisor.
5. Financial institutions as necessary in the execution of his duties.

III. Special Requirements

A. Work Requirements

Broad experience in the field of corporate accounting and finance and the development and use of various types of cost accounting systems.

B. Education

Formal college education in the field of business administration, specifically accounting and finance.

2.3.3.2.1

JOB TITLE: COST ACCOUNTANT

I. Duties and Responsibilities

A. General

Provide the cost accounting and analysis of all work performed by Skyway.

B. Specific

1. Provide cost reports and analysis for all work performed by Skyway Roofing.

2. Provide cost evaluation of estimating standards used by Skyway, Inc.

3. Maintain such records as necessary to provide the above functions.

4. Advises the ACCOUNTANT on all matters relative to cost accounting and analysis.

5. Perform additional accounting services as directed by the ACCOUNTANT.

II. Job Relations

A. Reports to: ACCOUNTANT.

B. Reporting Subordinates: None

C. Working Relations With:

1. Personnel of the accounting section.

2. Central office staff.

3. Field personnel submitting cost data.

4. Management personnel to whom cost reports are submitted.

III. Special Requirements

A. Work Requirements

Broad experience in the field of cost accounting systems and the preparation and analysis of cost accounting reports.

B. Education

Formal college education in the field of business administration, specifically, cost accounting.

2.3.3.2.2

JOB TITLE: GENERAL ACCOUNTANT

I. Duties and Responsibilities

A. General

Conduct the accounting and reporting of all the financial actions of Skyway.

B. Specific

1. Provide for the general accounting of the corporations.

2. Advise the ACCOUNTANT on all matters relative to general accounting.

3. Provide for routine financial operations of the corporations to include:

a. Time keeping.

b. Preparation and payment of all payrolls.

c. Administration of petty cash funds.

d. Collection and payment of all bills.

4. Prepare required external financial reports and such managerial reports as directed.

5. Other accounting functions as directed by the ACCOUNTANT.

II. Job Relations

A. Reports to: ACCOUNTANT

B. Reporting Subordinates: None

C. Working Relations With:

1. Personnel of the accounting section.

2. Central office staff.

3. Personnel responsible for time keeping records, petty cash, and payroll payments.

4. Financial institutions in which funds are deposited and through which loans are negotiated.

III. Special Requirements

A. Work Requirements

Experience in the field of accounting and the preparation of routine financial and accounting documents and reports.

B. Education

Formal college education in the field of business administration, accounting.

2.3.3.2.3

JOB TITLE: BOOKKEEPER

I. Duties and Responsibilities

A. General

Provide routine administrative support to the accounting section.

B. Specific

1. Provide clerical and accounting assistance to the COST and GENERAL ACCOUNTANTS.

2. Maintain all administrative supplies for the operation of the section.

3. Performs other duties as directed by the ACCOUNTANT.

II. Job Relations

A. Reports to: ACCOUNTANT

B. Reporting Subordinates: None

C. Working Relations With:

Other accounting section personnel

III. Special Requirements

A. Work Requirements

Some experience in the field of commercial bookkeeping.

B. Education

High School or commercial courses in bookkeeping and/or basic accounting.

2.3.3.3

JOB TITLE: PERSONNEL MANAGER

I. Duties and Responsibilities

A. General

Plan, execute and control personnel administration policies of Skyway.

B. Specific

1. Prepare and maintain personnel records.

2. Coordinates recruitment, training, and promotion programs.

3. Provide management with an evaluation of company employees' morale.

4. Periodically review and revise job descriptions.

5. Advise management on personnel requirements.

6. Manage employee benefit plans.

7. Advise management concerning the administration of wages and salaries.

II. Job Relations

A. Reports to: CENTRAL OFFICE MANAGER

B. Working Relations With:

1. Accounting

2. Advertising

3. Industrial Relations

4. Material Control

5. General Superintendent

6. Sales Managers

7. Projects Manager

8. Salesmen

9. Central Office Staff

III. Special Requirements

A. Work Requirements

General knowledge of personnel office procedures, file and record keeping practices.

B. Education

One to two years of college, preferably including training in personnel or business administration. Must be able to interpret and write personnel policy, training programs and job descriptions.

2.3.3.4

JOB TITLE: LABOR RELATIONS MANAGER

I. Duties and Responsibilities

A. General

Responsible for detail knowledge of labor contracts in areas wherein Skyway has interests, briefs foremen and supervisors on these contracts, and acts as labor trouble shooter for the company.

B. Specific

1. Reads, interprets, and maintains up-to-date information on all labor contracts and requirements in areas where Skyway is presently operating or plans to contract for future work.

2. Briefs salesmen, foremen and supervisors on the details of labor contracts and the idiosyncrasies of business agents and workers in contract areas.

3. When disagreements arise, represent company and effect satisfactory solutions when possible.

4. Periodically brief top management in labor areas, especially prior to submission of final estimate or bids so as to ensure all labor contingencies have been considered.

5. Perform other duties as may be assigned.

II. Job Relations

A. Reports to: CENTRAL OFFICE MANAGER

B. Reporting Subordinates: None

C. Working Relations With:

1. Salesmen
2. Supervisor
3. Foremen
4. Business Agents
5. Union Stewards
6. Projects Manager
7. Office Staff
8. Sales Managers
9. Branch Managers

III. Special Requirements

A. Work Requirements

Intimate knowledge of all applicable contracts, ability to work with workers as well as other levels of unions and management.

B. Education

Formal education, as such, not a governing factor, however, some training in labor relations desirable.

2.3.3.5

JOB TITLE: MATERIAL CONTROL MANAGER

I. Duties and Responsibilities

A. General

Responsibility for overall coordination and accountability of buildings, equipment, materials and vehicles.

B. Specific

1. Supervise and advise on purchases of materials and equipment.

2. Advise top management on shop and warehousing needs.

3. Interviews, selects and trains subordinates.

4. Maintains records, accountability and general status data on building, shops, warehouses, materials and equipment.

II. Job Relations

A. Reports to: CENTRAL OFFICE MANAGER

B. Reporting Subordinates:

1. PURCHASING AGENT

2. METAL SHOP FOREMAN

3. WAREHOUSE FOREMAN

4. EQUIPMENT FOREMAN

C. Working Relations With:

1. Accounting

2. Personnel

3. Advertising

4. Labor Relations

5. Projects Manager

6. Salesmen

7. Expeditors

8. Clerical Staff

III. Special Requirements

A. Work Requirements

A broad knowledge of the roofing and construction trade. Some experience in purchasing and accounting desirable.

B. Education

One to two years college or sound background and experience in building trade and office management.

2.3.3.5.1

JOB TITLE: EQUIPMENT FOREMAN

I. Duties and Responsibilities

A. General

Receives, stores, issues, and accounts for roofing and building equipment.

B. Specific

1. Receives invoiced equipment, equipment returned from roofing and construction jobs and issues or re-issues equipment.

2. Delivers invoice sheets and equipment status lists to Material Control Office.

3. Properly maintains all equipment and assures security thereof.

4. Operates trucks and forklifts.

5. Assists in loading, unloading and selecting material from stock.

6. Assures accuracy of incoming and outgoing equipment in accordance with invoice or equipment list. Maintains nominal records.

7. Advises MATERIAL CONTROL MANAGER of misuse, deterioration, or loss of equipment.

8. Occasionally delivers equipment to job site.

II. Job Relations

A. Reports to: MATERIAL CONTROL MANAGER

B. Working Relations With:

1. PROJECTS SUPERINTENDENT
2. FOREMAN
3. TRUCK DRIVERS
4. WAREHOUSE FOREMAN
5. METAL SHOP FOREMAN
6. PURCHASING AGENT
7. PROJECTS MANAGER

III. Special Requirements

A. Work Requirements

Two months required to teach the employee the details of the various duties to be performed. About three months to reach full proficiency. No previous experience necessary but employee must be trained in the use of trucks and forklifts and in equipment handling methods.

B. Education

Two to four years of high school. Must be able to handle figures readily. Must be able to read and interpret instructions.

C. Remarks

Some planning is called for in organizing work on a limited scale. This job is essentially routine in character, although the many tasks permit considerable variety.

2.3.3.5.2

JOB TITLE: WAREHOUSE FOREMAN

I. Duties and Responsibilities

A. General

Receives, stores, issues, and accounts for roofing and building materials.

B. Specific

1. Receives invoiced materials, materials returned from roofing and construction jobs and issues or re-issues materials.

2. Delivers invoice sheets and records of returned materials to Material Control Office.

3. Properly stores and assures security of materials stock.

4. Operates trucks and forklifts.

5. Assists in loading, unloading and selecting materials from stock.

6. Occasionally delivers materials to job.

7. Assures accuracy of incoming and outgoing materials in accordance with invoice and materials list. Maintains nominal records.

8. Advises MATERIAL CONTROL MANAGER of misuse, deterioration, or loss of warehoused materials.

II. Job Relations

A. Reports to: MATERIAL CONTROL MANAGER

B. Working Relations With:

1. PROJECTS SUPERINTENDENT
2. FOREMAN
3. TRUCK DRIVERS
4. EQUIPMENT FOREMAN
5. METAL SHOP FOREMAN
6. PURCHASING AGENT
7. PROJECTS MANAGER

III. Special Requirements

A. Work Requirements

Three months required to teach the employee the details of the various duties to be performed. About four months to reach full proficiency. No previous experience is necessary but employee must be trained in the use of trucks and forklifts and should have some training in inventory control and handling techniques.

B. Education

Two to four years of high school. Must be able to handle figures readily. Must be able to read and interpret instructions.

C. Remarks

There are a number of detailed operations to this job which must be performed according to standard procedure. Some planning is called for in organizing work on a limited scale. This job is essentially routine in character, although the many tasks permit considerable variety.

2.3.3.5.3

JOB TITLE: METAL SHOP FOREMAN

I. Duties and Responsibilities

A. General

Designs, fabricates, and installs metal components used on roofing and construction projects.

B. Specific

1. Orders, maintains, and accounts for stock of metal raw materials.

2. Operates and maintains the following: Breaks, Shears, Lock, Crimping, Beading, Nipper, Drilling, Welding, and any other company supplied metal working equipment and machines.

3. Designs, fabricates and installs drainage pipes, drainage gutters, air conditioning/heating ducts, vent collars, pitch boxes, and metal edging.

4. Works in metal shop or on the job site.

5. Does other miscellaneous metal work as assigned.

II. Job Relations

A. Reports to: MATERIAL CONTROL MANAGER

B. Reporting Subordinates: Metal Shop Workers

C. Working Relations With:

1. PROJECTS MANAGER

2. PROJECTS SUPERINTENDENT

3. EXPEDITOR

4. PURCHASING AGENT

5. FOREMAN

III. Special Requirements

A. Work Requirements

One year required to teach the employee the details of the various duties to be performed. Four years required to reach journeyman class.

B. Education

Two to four years high school, preferably including vocational training. Must be able to handle figures readily, read blueprints and sheet metal drawings.

C. Remarks

There are a number of detailed operations involved in this job which must be performed according to standard procedure, although the many tasks permit considerable variety. Some planning is called for in organizing work on a limited scale.

2.3.3.5.4

JOB TITLE: PURCHASING AGENT

I. Duties and Responsibilities

A. General

Provide, in an efficient manner, all materials and equipment necessary to perform roofing and construction jobs.

B. Specific

1. Assist the MATERIAL CONTROL MANAGER as directed and keep him informed of purchasing problems.

2. Upon request by the PROJECTS MANAGER or EXPEDITOR, procure materials necessary for particular jobs.

3. Purchase for inventory as directed by the MATERIAL CONTROL MANAGER.

4. Maintain a listing of the current material and equipment prices.

5. Maintain a list of vendors and have on hand appropriate vendor catalogs.

6. Supply the MATERIAL CONTROL MANAGER with a copy of all purchase orders so that the inventory cards may be kept up to date.

7. Recommend changes in ordering quantities when prices and/or demands have changed.

8. Obtain bids from the vendors when the size of the job or customer dictates such action.

9. Maintain a record of delivery time for all purchases.

10. On designated dates, send invoices received to accounting.

11. Purchase vehicles and roofing equipment as directed.

II. Job Relations

A. Reports to: MATERIAL CONTROL MANAGER

B. Working Relations With:

1. WAREHOUSE FOREMAN

2. METAL SHOP FOREMAN

3. EQUIPMENT FOREMAN

4. PROJECTS MANAGER and EXPEDITOR

5. Accounting

6. PROJECTS SUPERINTENDENT

III. Special Requirements

A. Work Requirements

1. A general knowledge of the roofing and construction trades.

2. An ability to perform simple record keeping operations.

2.3.3.6

JOB TITLE: ADVERTISING MANAGER

I. Duties and Responsibilities

A. General

Plan and implement the advertising program for Skyway Roofing and Skyway, Inc.

B. Specific

1. Submit, via the CENTRAL OFFICE MANAGER, separate advertising programs and changes thereto, to the SALES MANAGERS for their approval.

2. Suggest ways that advertising effectiveness can be determined.

3. Propose an annual advertising budget.

4. Keep a current record of all advertising expenditures.

5. Continually analyze all advertising media for changes that might effect Skyway's programs.

II. Job Relations

A. Reports to: CENTRAL OFFICE MANAGER

B. Working Relations With:

1. SALES MANAGERS - in planning and implementing advertising programs.

2. Printing companies.

3. Accounting

III. Special Requirements

A. Work Requirements

1. A general knowledge of the roofing and construction trades.

2. A sound knowledge of advertising.

3. A good command of the English language.

2.3.4 Skyway Roofing Co., Inc.

Skyway Roofing Co., Inc., performs all operations involving industrial re-roofing and large new construction roofing and siding installations. Marketing and operations are directed by the General Manager, Sales Manager, and Projects Manager from the central office in Troy, New York. The Sales Manager coordinates and controls all sales activities of the branch offices in various cities throughout the Northeastern United States. The Projects Manager coordinates all activities concerned with estimating for proposed projects and planning and controlling active projects.

This section contains job descriptions for the functions assigned to the Skyway Roofing Co., Inc.

2.3.4.1

JOB TITLE: GENERAL MANAGER, Skyway Roofing Co., Inc.

I. Duties and Responsibilities

A. General

Direct, supervise, control, and coordinate all operations of Skyway Roofing Co., Inc.

B. Specific

1. Review operations periodically to assure that company objectives are being carried out by subordinates.

2. Determine policies to be followed in sales, advertising, estimating, and cost control.

3. Approve final estimates for all proposed projects.

4. Approve hiring of immediate subordinates and all BRANCH MANAGERS and establish salary rates.

5. Make final determination as to location of additional branch offices.

6. Review status reports submitted by the PROJECTS MANAGER, initiating corrective action as necessary.

7. Prepare in coordination with immediate subordinates annual budget for the approval of the Board of Control.

8. Emphasize good public relations by active participation in professional societies and industrial exhibitions.

II. Job Relations

A. Reports to: Board of Control

B. Reporting Subordinates: SALES MANAGER and PROJECTS MANAGER of Skyway Roofing and the CENTRAL OFFICE MANAGER.

C. Working Relations With:

1. GENERAL MANAGER, Skyway, Inc. - in coordinating the mutual use of the central administration and support unit.

2. CENTRAL OFFICE MANAGER - in standardizing procedures to be used in support of Skyway Roofing via:

a. Accounting Section - in approving cost accounting techniques and setting guidelines for the salary incentive system.

b. Personnel Section - in submitting requirements for additional personnel.

c. Labor Relations Section - in assisting in management-labor relations.

d. Material Control Section - in determining need for additional capital expenditures.

e. Advertising Section - in approving overall advertising proposals.

III. Special Requirements

A. Work Requirements

General knowledge of the construction industry, accepted business practices, modern sales and marketing techniques, costing, and the technical aspects of the roofing and building trades.

B. Education

College degree in Business Administration or Management.

2.3.4.2

JOB TITLE: PROJECTS MANAGER

I. Duties and Responsibilities

A. General

Plan, and carry forward to completion, with only minor direction, industrial roofing and construction projects.

B. Specific

1. Assist the GENERAL MANAGER of Skyway Roofing as directed and keep him informed as to the status of current industrial projects.

2. Obtain copies of project job-specifications, blueprints, contract drawings, and architect's drawings for the engineering, estimating, and accomplishment of industrial roofing and construction projects.

3. Prepare engineering analyses and bid (cost) estimates as directed by higher authority, as requested by sales personnel, or as necessary for the accomplishment of contracted project work and subsequent additions thereto.

4. Exercise project control primarily from the home office, implement the project organization, and assume operating responsibility for all aspects of contracted industrial roofing and construction work.

5. Plan, compile and maintain line-of-balance charts on major industrial projects. Update line-of-balance charts at least weekly.

6. Maintain current progress charts and work schedules

on all industrial projects, indicating:

a. Percent completion of contracted construction and/or roofing work.

b. Percent completion of "extra" work negotiated subsequent to primary contractual agreement.

c. Days lost or work delay due to weather, blow-offs, union difficulties, general contractor problems, or work surfaces not being released on schedule for Skyway project work.

d. A general comparison of estimated and actual labor and materials updated costs on original contract work and the cumulative percent of total estimated costs on "extras."

e. A daily summary of the number of construction crews working on each industrial project.

f. Original contract dates for the release of work surfaces to Skyway and actual dates of release.

g. Contract project completion date.

h. Current estimated project work completion date.

i. Any special or critical materials needed at job sites, including the following information:

(1) Date required at project.

(2) Date of material order by PURCHASING AGENT.

(3) Probable delivery date.

(4) Actual delivery date to job site.

7. Coordinate, control, and provide major guidance for the activities and training of the industrial PROJECTS SUPERINTENDENT and individual project foreman.

8. Schedule, coordinate, and control the supply of equipment, materials, and labor to efficiently accomplish project requirements.

9. Visit project sites as necessary to observe work progress, clarify engineering or construction details, for personal coordination with the general contractor's superintendent, to investigate minor work disputes, and to inspect and evaluate the validity of "punch list" items delineated by the general contractor.

10. Investigate the technical construction details of industrial customers' complaints.

11. Provide for the procurement and training of capable individuals to meet the company's expanding future needs for additional experienced supervisory personnel in the project superintendent/foreman capacity.

12. Evaluate the performance of industrial projects personnel and recommend appropriate management action.

13. Prepare and submit promptly reports required by various echelons of the company or other external business elements.

14. For each project, compile and maintain job folders containing original and/or file copies of all correspondence and data pertaining to the management of the project.

II. Job Relations

A. Reports to: GENERAL MANAGER, Skyway Roofing.

B. Reporting Subordinates:

1. PROJECTS SUPERINTENDENT

2. ESTIMATOR

3. PROJECT FOREMAN

C. Working Relations With:

1. All elements of the central office staff, particularly:

a. Accounting Section - in the preparation of estimated and updated actual cost comparisons and the periodic "demands for payment."

b. Labor Relations Section - in the determination of specific area union wage rates for the accurate preparation of bid estimates and in the expeditious handling of labor disputes at industrial project sites.

c. Material Control Section - in coordinating the timely ordering, procurement, and delivery of equipment and materials to project job sites.

2. SALES MANAGER, BRANCH MANAGERS, and SALES ENGINEERS - in coordinating the conduct of joint engineering analyses, preparing realistic bid (cost) estimates, handling customer complaints, and arranging a schedule of "call-backs."

3. EXPEDITOR - in coordinating the mutual use of roofing and construction men, materials, and equipment.

4. General Contractor and other construction trades personnel - in conducting and coordinating project work.

III. Special Requirements

A. Work Requirements

Sound journeyman knowledge in all facets of the roofing and construction trades, a capability to manage and coordinate widely scattered work activities, and estimating and engineering experience.

2.3.4.3

JOB TITLE: ESTIMATOR

I. Duties and Responsibilities

A. General

With a minimum of direct supervision, estimate material and equipment requirements, and labor costs in the preparation of competitive bids on particular roofing and construction job contract offers.

B. Specific

1. Assist the PROJECTS MANAGER as directed and keep him informed concerning the status and pricing of bid (cost) estimates.

2. As directed by higher authority or on request by other company echelons, calculate bid estimates on a standard estimate form, clearly understandable and legible, in sufficient copies for proper perusal by company echelons concerned.

3. Assist the PROJECTS MANAGER in preparing engineering analyses.

4. Maintain an up-to-date record of bid estimates, indicating where possible the number (and percent of total bids) of successful bid proposals, the amount by which unsuccessful bids differed from the low bidder, and a notation of any assumptions or errors that altered the accuracy of particular bids.

5. Maintain a job cost record summary (data as provided by Accounting) to verify the accuracy of previous bid

(cost) estimates.

6. Calculate bid estimates on a man-hours per area basis, taking into account the average hourly wage rate and other monetary compensation and benefits paid for union labor in the area of the prospective construction.

II. Job Relations

A. Reports to: PROJECTS MANAGER

B. Reporting Subordinates: None

C. Working Relations With:

1. All elements of the central office staff - particularly accounting, labor relations, and material control (purchasing), in the preparation of bid estimates and job cost records.

2. The SALES MANAGER, BRANCH MANAGERS, and SALES ENGINEERS - in coordinating the preparation of estimates and engineering analyses.

III. Special Requirements

A. Work Requirements

Extensive experience and skill in making accurate estimates and engineering analyses of roofing and construction work.

2.3.4.4

JOB TITLE: PROJECTS SUPERINTENDENT

I. Duties and Responsibilities

A. General

Superintend and coordinate the work activities and overall on-site progress of industrial roofing and construction projects.

B. Specific

1. Assist the PROJECTS MANAGER as directed and keep him informed of the industrial work progress.

2. Acting as the PROJECTS MANAGER's representative, exercise project control at the various project sites by personally directing and providing guidance for the activities of the project foremen and labor crews.

3. Conduct a timely evaluation of the current status of all assigned industrial projects and report at least once daily to the PROJECTS MANAGER in person or via telephone.

4. Coordinate the resolution of minor work disputes and engineering or construction problems with the general contractor's superintendent and supervisory union personnel.

5. Coordinate and control, through the PROJECTS MANAGER's office, the supply of equipment, materials, and labor required at each project site.

6. Negotiate directly "extra" work contracts with general contractor personnel up to a value of $400. Refer "extra" work proposals in value in excess of $400 to the PROJECTS MANAGER.

7. In the event of potentially major labor or union strife, contact the PROJECTS MANAGER for proper guidance prior to obligating the company to any verbal agreement.

II. Job Relations

A. Reports to: PROJECTS MANAGER

B. Reporting Subordinates:

1. PROJECT FOREMAN

2. Labor crews.

C. Working Relations With:

1. Union Representatives.

2. General contractor personnel.

3. Material control section.

III. Special Requirements

A. Work Requirements

A sound journeyman knowledge of the planning and application of the roofing and the construction trades, skill in construction and engineering details, and a capability to effectively coordinate and direct the activities of numerous work crews.

B. Physical Condition

Good physical condition is required to withstand the strenuous type of work involved while working outdoors in all types of weather.

2.3.4.5

JOB TITLE: FOREMAN, Skyway Roofing Co., Inc.

I. Duties and Responsibilities

A. General

Direct and supervise the activities of labor crews at industrial roofing and construction project sites.

B. Specific

1. Assist the PROJECTS SUPERINTENDENT as directed and keep him informed as to the status of assigned project.

2. In the absence of the PROJECTS SUPERINTENDENT, assume responsibility as the company's primary on-site representative in all matters involved in the accomplishment of contracted work projects.

3. Coordinate and control the hiring of labor crews to most expeditiously and efficiently accomplish contracted projects.

4. Provide for the on-site security of company equipment and material against pilferage, damage, and inclement weather.

5. Provide technical guidance to the labor crews, working with them as necessary to insure compliance with contracted job specifications.

6. Accomplish those measures necessary to minimize damage to work in progress from "blow-offs" due to high winds and the deteriorating effects of accumulations of snow and rain.

7. Accomplish the work involved in previously uncontracted "extras" up to value of $200.

8. Refer all but the most minor labor disputes to the PROJECTS SUPERINTENDENT or the PROJECTS MANAGER.

9. Coordinate, through the PROJECTS SUPERINTENDENT or the PROJECTS MANAGER, the necessary supply of equipment, materials, and labor at assigned project site.

10. Prepare and submit daily labor reports to the PROJECTS MANAGER.

II. Job Relations

A. Reports to: PROJECTS SUPERINTENDENT, or, in his absence, to the PROJECTS MANAGER.

B. Reporting Subordinates:

1. Elements of company employed personnel.

2. Hired union labor crews.

C. Working Relations With:

1. Union representatives.

2. General contractor personnel.

3. Accounting.

III. Special Requirements

A. Work Requirements

Sound journeyman knowledge in the application of roofing and construction trade skills and the capability to effectively direct the work of labor crews.

B. Physical Condition

Excellent physical condition is required for the strenuous type work involved, usually outdoors in all types of weather.

2.3.4.6

JOB TITLE: SALES MANAGER, Skyway Roofing Co., Inc.

I. Duties and Responsibilities

A. General

Develop and implement sales plans, objectives, and policies for Skyway Roofing.

B. Specific

1. Advise the GENERAL MANAGER of the current progress of industrial sales.

2. Coordinate the selling effort of the various branches.

3. Control and provide for the training of SALES ENGINEERS.

4. Review estimates and contracts for large re-roofing jobs (in excess of a fixed dollar amount).

5. Supply the PROJECTS MANAGER with the necessary data so that he can schedule all jobs and prepare bid estimates as required.

6. Determine sale goals for Skyway Roofing and each branch. Maintain a chart of the current progress toward these goals.

7. Visit the branch offices as necessary to observe sales procedures.

8. Maintain sales territories approximately equal in potential.

9. Keep abreast of new products, programs, or techniques that competitors might exploit.

10. Review the advertising program as recommended by the ADVERTISING MANAGER and provide him with data on the effectiveness of this program.

11. Provide for and attempt to maintain sales competition between branches and SALES ENGINEERS by using some type of incentive.

12. Provide for the procurement of additional SALES ENGINEERS and sales office staff to meet company needs.

II. Job Relations

A. Reports to: GENERAL MANAGER, Skyway Roofing.

B. Reporting Subordinates: BRANCH MANAGERS.

C. Working Relations With:

1. All elements of the central office staff, particularly:

a. ADVERTISING MANAGER - in evaluating the advertising program.

b. Accounting - in forecasting sales and determining sales goals.

2. PROJECTS MANAGER and ESTIMATOR - in coordinating bid (cost) estimates on major re-roofing jobs and passing on of information regarding customer desires.

3. SALES MANAGER, Skyway, Inc. - sales overlap.

III. Special Requirements

A. Work Requirements

1. A sound knowledge of the roofing and construction trades.

2. Selling and estimating experience.

3. Management experience, such as might have been obtained from being a BRANCH MANAGER.

2.3.4.7

JOB TITLE: BRANCH MANAGER, Skyway Roofing Co., Inc.

I. Duties and Responsibilities

A. General

Implement sales plans, objectives, and procedures for the branch office of Skyway Roofing.

B. Specific

1. Assist the SALES MANAGER as directed and keep him abreast of the progress of sales.

2. Coordinate the selling effort of assigned SALES ENGINEERS.

3. Plan efficient sales-call routes.

4. Provide training, as directed, for the SALES ENGINEERS.

5. Review all estimates and contracts prior to their delivery to the customer.

6. Maintain a chart of the current progress of the branch toward achieving its sales goal.

7. Provide for a system to handle customer complaints.

8. Obtain data from the SALES ENGINEERS on the effectiveness of the advertising program.

9. Maintain current customer contact cards.

10. Evaluate the performance of the SALES ENGINEERS.

11. Review all expense reports submitted by the SALES ENGINEERS.

12. Compare actual job cost with estimated cost.

13. Provide the SALES MANAGER with copies of all estimates and contracts.

II. Job Relations

A. Reports to: SALES MANAGER, Skyway Roofing.

B. Reporting Subordinates: SALES ENGINEERS.

C. Working Relations With:

1. Other BRANCH MANAGERS.

2. PROJECTS MANAGER and ESTIMATOR - in supplying required information on re-roofing and new construction jobs.

III. Special Requirements

A. Work Requirements

1. A sound knowledge of the roofing and construction trades.

2. Selling and estimating experience.

B. Remarks

Person, dress, and personality must be such that a favorable impression is made when contacting customers.

2.3.4.8

JOB TITLE: SALES ENGINEER

I. Duties and Responsibilities

A. General

Make sales by offering prospective customers a competitive price on roofing and construction work.

B. Specific

1. Assist the BRANCH MANAGER as directed and keep him informed of sales progress.

2. Make sales calls as directed by the BRANCH MANAGER.

3. Prepare estimates and contracts for approval by the BRANCH MANAGER.

4. When possible, visit customer while job is in progress.

5. Communicate information concerning customer complaints to the BRANCH MANAGER.

6. When making calls, ascertain the effectiveness of Skyway Roofing's advertising program.

7. Submit expense reports to the BRANCH MANAGER.

8. Make necessary changes to customer contact cards.

II. Job Relations

A. Reports to: BRANCH MANAGER.

B. Working Relations With: Other SALES ENGINEERS.

III. Special Requirements

A. Work Requirements

1. General selling experience.

2. An ability to estimate jobs.

B. Remarks

Person, dress, and personality must be such that a favorable impression is made on prospective customers.

2.3.5 Skyway, Inc.

Skyway, Inc., performs operations in the residential and small commercial category. Services performed are roofing, siding, interior home improvements, and miscellaneous exterior installations and repairs. Operations are directed by the General Manager and Sales Manager from the central office at Troy, New York. Branch offices throughout New York and Massachusetts are, once established, virtually independent except for direction and guidance from the Sales Manager.

This section contains job descriptions for the functions assigned to Skyway, Inc.

2.3.5.1

JOB TITLE: GENERAL MANAGER, Skyway, Inc.

I. Duties and Responsibilities

A. General

Direct, supervise, control, and coordinate all operations of Skyway, Inc.

B. Specific

1. Review operations periodically to assure that company objectives are being carried out by subordinates.

2. Determine policies to be followed in sales, advertising, branch operations, and cost control.

3. Approve establishment of branch offices and hiring of branch managers.

4. Serve as chairman of the committee which reviews salesmen's estimating guidelines and salary incentive system.

5. Approve acceptance of larger contracts.

6. Review weekly summary of operations and upgrade policies and directives as necessary.

7. Prepare in coordination with immediate subordinates annual budget for the approval of the Board of Control.

8. Emphasize good public relations by active participation in professional societies and industrial exhibitions.

II. Job Relations

A. Reports to: Board of Control.

B. Reporting Subordinates: SALES MANAGER of Skyway, Inc., and CENTRAL OFFICE MANAGER.

C. Working Relations With:

1. GENERAL MANAGER, Skyway Roofing - in coordinating the mutual use of the central administration and support unit.

2. CENTRAL OFFICE MANAGER - in standardizing procedures to be used in supporting all operations for Skyway, Inc. Also:

a. Accounting Section - in approving cost accounting procedures and setting guidelines for the salary incentive system.

b. Personnel Section - in submitting requirements for additional personnel.

c. Materials Control Section - in determining need for additional capital expenditure.

d. Advertising Section - in approving overall advertising proposals.

III. Special Requirements

A. Work Requirements

General knowledge of the construction industry, accepted business practices, modern sales and marketing techniques, costing, and the technical aspects of the roofing and building trades.

B. Education

College degree in Business Administration or Management.

2.3.5.2

JOB TITLE: SALES MANAGER, Skyway, Inc.

I. Duties and Responsibilities

A. General

Responsible for overall coordination of branches established as a part of Skyway, Inc. Participates with higher management echelons in determination of sales policy, advertising, training, market research, hiring, and assisting in all endeavors of Skyway, Inc.

B. Specific

1. Interview, select, and train BRANCH MANAGERS.

2. Acts as top management representative in establishment of branches and works closely with branch managers in first stages of establishment.

3. Travels to various branches to assist, recommend, and provide guidance.

4. Advises top management on sales and advertising policy, materials purchasing, and job costing.

5. Serves on committee which reviews salesman estimating guidelines and salary incentive system.

6. Advises on approval or disapproval of larger contracts.

7. Serves as management representative where necessary.

8. Provides top management with a weekly detailed summary of Skyway, Inc., operations.

9. Actively engage in selling effort when time permits.

10. Perform other duties as assigned.

II. Job Relations

A. Reports to: GENERAL MANAGER, Skyway, Inc.

B. Reporting Subordinates: BRANCH MANAGERS.

C. Working Relations With:

1. Accounting
2. Advertising
3. Material Control
4. Personnel
5. Projects Manager
6. Central Office Manager
7. Skyway, Inc., Salesmen and Expeditors
8. Central Office Staff

III. Special Requirements

A. Work Requirements

1. Professional: Broad experience in contracting, building, estimating, carpentry, costing and selling fields.

2. Non-professional: Personable, well-groomed, able to inspire confidence in subordinates, leadership ability, ability to meet and know people quickly, be familiar with geographical area.

B. Education

Formal education, as such, not a determining factor.

2.3.5.3

JOB TITLE: BRANCH MANAGER, Skyway, Inc.

I. Duties and Responsibilities

A. General

Responsible for overall functioning of Skyway, Inc., branch. Assists in writing and approves all contracts within his branch. Sells when time permits. Coordinates schedules and sales activities within branch.

B. Specific

1. Interviews and hires SALESMEN, EXPEDITORS, and SUPERVISORS.

2. Advises SALES MANAGER in areas of sales, policy, advertising, purchasing, expansion, job costing, and estimating within his branch.

3. Forwards large contracts to home office for approval.

4. Approves and assists in writing of all contracts.

5. Provides home office with weekly summary of branch operations.

6. Serves on committee which establishes estimating guidelines for his branch.

7. Oversees scheduling, progress, and satisfactory completion of jobs in his branch.

8. Trains SALESMEN.

9. Perform other duties as assigned.

II. Job Relations

A. Reports to: SALES MANAGER

B. Reporting Subordinates:

1. BRANCH SALESMEN
2. EXPEDITOR
3. Office Staff

C. Working Relations With:

1. Other branch managers
2. Workmen
3. Supervisor
4. Material Control
5. Advertising
6. Accounting
7. Local material suppliers

III. Special Requirements

A. Work Requirements

1. Professional: Experience in contracting, building, estimating, carpentry, costing and selling fields.

2. Non-professional: Personable, well-groomed, able to inspire confidence in subordinates, leadership ability, ability to meet and know people quickly, be highly familiar with geographic area.

B. Education

Formal education, as such, not a determining factor.

2.3.5.4

JOB TITLE: SALESMAN

I. Duties and Responsibilities

A. General

Travel throughout assigned geographical area selling residential and small commercial repairs and improvements.

B. Specific

1. Calls upon prospective customers and attempts to sell services and products offered by Skyway, Inc.

2. Estimate cost of work desired by customers.

3. Coordinate, when necessary, engineering of contracted jobs with EXPEDITOR, SUPERVISOR, or workers.

4. Deliver contracts to customer for signing and explanation.

5. Call on customers when jobs are completed to insure customer satisfaction.

6. Monitor progress on all personally contracted jobs.

7. Perform other duties as assigned.

II. Job Relations

A. Reports to: BRANCH MANAGER

B. Reporting Subordinates: None

C. Working Relations With:

1. Other salesmen

2. Office staff

3. Expeditor

4. Workers

5. Supervisor

6. Local material suppliers

III. Special Requirements

A. Work Requirements

1. Professional: Experience in contracting, building, estimating, carpentry, and selling fields.

2. Non-professional: Personable, well-groomed, ability to meet and know people quickly, highly familiar with the assigned geographic area.

B. Education

Formal education, as such, not a determining factor.

2.3.5.5

JOB TITLE: EXPEDITOR

I. Duties and Responsibilities

A. General

Responsible for the scheduling, progress, and current status of all jobs. Assign workers to jobs as required.

B. Specific

1. Schedules and plans all jobs.

2. Assigns necessary workers and supervisor, if required.

3. Engineers jobs when necessary.

4. Provides plans when necessary.

5. Instructs and dispatches workers.

6. Schedules material.

7. Orders required materials from Material Control.

8. Costs jobs as they progress and compiles final total costs which are forwarded to accounting.

9. Oversees progress of jobs and ensures satisfactory progress as necessary.

10. Hires and fires workers consistent with the policy of BRANCH MANAGER.

11. Arranges for procurement of building permits.

12. Perform other duties as assigned.

II. Job Relations

A. Reports to: BRANCH MANAGER

B. Reporting Subordinates:

1. Workers

2. Supervisors

C. Working Relations With:

1. Local material suppliers

2. Material Control

3. Salesmen

4. Accounting

5. Projects Manager (Troy Industrial Branch)

III. Special Requirements

A. Work Requirements

Experience in building, carpentry, costing, purchasing, ordering, and planning.

B. Education

Formal education, as such, not a determining factor.

2.3.5.6

JOB TITLE: SUPERVISOR

I. Duties and Responsibilities

A. General

Supervise those jobs which require three or more men and jobs for which plans are necessary.

B. Specific

1. In charge of jobs where three or more workers and/or where interpretation of plans are necessary.

2. Assists in work where feasible and possible.

3. Inform EXPEDITOR of status and further requirements of jobs.

4. Perform other duties as assigned.

II. Job Relations

A. Reports to: EXPEDITOR

B. Reporting Subordinates: Assigned workers

C. Working Relations With:

1. Other Supervisors

2. Salesmen

3. Material Control

III. Special Requirements

None

PART 2

CENTRAL ADMINISTRATION AND CONTROL

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PART 2

CENTRAL ADMINISTRATION AND CONTROL

CHAPTER 1

ADMINISTRATION AND PERSONNEL

1.1 Personnel Administration and Control

Personnel administration involves the management of human beings. An organization implies people, and it is through these people that the objectives or goals of the organization are accomplished.

Throughout this report, it is apparent that Skyway is characterized by change. This company has far exceeded the span of control of a one-man management enterprise. Thus, in moving away from the one-man, autocratic leadership, top management must become aware of the impact that changes in organizational structure and management techniques have on the individual and hence, on corporate efficiency. As Skyway expands, its management's philosophy must become oriented toward the motivation and coordination of the activities of others.

The degree to which an employee is allowed to produce and participate in the company is specified by the organizational structure which establishes an area of responsibility. Delegation of authority to carry out these responsibilities centers around the personal relationship between the executive and his immediate subordinate. Human relations problems are caused by imperfections in the manner in which these processes are handled.

Among the employees interviewed, a low degree of job satisfaction was evident. It was interesting to note that this lack of satisfaction did not arise from any economic source, but rather from needs far more intangible. These needs centered around security, autonomy, acceptance, and the need for knowledge of where one stood. One worker, after explaining a long list of recent accomplishments which obviously saved the company many dollars, stated, "He doesn't think he needs me around here except part time." Others complained that advice and information pertaining to their areas of responsibility were neither solicited nor accepted by higher management. There was the general feeling that responsibility and authority were both limited and ill-defined.

Skyway management should seek to get the most from the employees of the company by clearly assigning responsibility and authority in such a manner as to give maximum freedom of action. This should assist in maximizing job satisfaction and minimizing ambiguity and frustration on the part of the employees. This can best be obtained by adopting the philosophy and methods of "general supervision."

General supervision gives subordinates an opportunity to make decisions within their areas of responsibility. It is really a form of job enlargement, for it gives each subordinate a sense of being his own boss and of exercising control over his working environment. It is based on the satisfaction that people derive from deciding how to do a job in their own way.

Certainly it is not suggested that general supervision is a panacea for the needs of Skyway, nor a substitute for sound management; it is merely a management "tool" that helps create a work situation which provides subordinates with the maximum opportunity for accomplishment, self-expression, and individual development consistent with the needs of the company.

This method of satisfying employees' needs not only promotes efficiency and contributes to a sound, healthy, and profitable company, but also allows top management the freedom to guide the company. Only through the clear delineation of responsibilities and delegation of authority can he avoid being immersed in details which impair his managerial efficiency.

1.1.1 Training and Promotions

At present, no formal in-service training program of any consequence is in existence at Skyway. However, due to recent organizational and personnel changes there is a considerable "learn as you go" program in progress.

The nature of Skyway's activities does not necessitate much technical training. Employees, with the exception of the office staff, are hired from a work force of experienced workers and are considered skilled in their vocation. The wages paid are in proportion to the worker's degree of proficiency. There is, however, an immediate and growing need for "managerial development." For the most part, this company is preoccupied with immediate requirements and with short-run development projects. Long-run manpower planning is, at this point, highly

complicated due to the rapid growth rate.

This rapid growth leaves the company no choice as to whether to develop executives through promotion from within, or hire them as needed from among persons who have proved themselves with other companies. The situation, as it exists, makes selection of personnel crucial. It must be borne in mind that although bringing in personnel from the outside may introduce a fresh, new approach to management problems, at the same time, too many fresh approaches may disrupt the organization.

In planning for management development, the company must predict its long-range managerial manpower needs and decide how to meet them. It is believed that a hiring and training program oriented toward future promotion from within should be an objective of this company. This type of program will tend to raise morale, provide an incentive for junior executives to exert their best efforts, and eliminate the need for a long orientation period when a higher position is filled.

1.1.2 Personnel Records

The present organizational structure at Skyway does not provide for a personnel department or section. In the past, personnel records have been kept only for payroll purposes. It is felt that this system will not suffice to meet the requirements of the future based on the company's expansion plans.

In line with the proposed organizational structure discussed in Part 1, Chapter II, the minimum records which should be maintained on each employee should include records

of wage information, insurance, seniority and any other vital statistics which might affect the company.

1.1.3 Job Descriptions

The job description is usually a written description of the operations, duties, methods, working conditions, equipment and material used, lines of authority, and other essential facts about a job or position. The job specification is a statement of the qualities or abilities that a worker must possess to perform the job in a satisfactory manner.

Based on the above definitions, it was considered appropriate to design a set of job descriptions/job specifications in combination. Proposed job descriptions and specifications, found elsewhere in this report, are believed to cover all duties and responsibilities of the various jobs of the company to the maximum degree possible. Some flexibility in these descriptions has been allowed. However, it is believed that most gaps and overlaps contained in the present system have been reduced.

For job descriptions to be effective, it must be remembered that any change in the organizational structure may affect duties and responsibilities and, therefore, should be the occasion for a critical review of all descriptions lying in the area of change.

1.1.4 Salary Payroll

The payroll for Skyway Roofing Company, Inc., and

Skyway, Inc., is divided into three categories: weekly salaried, hourly non-union, and hourly union. Salaries and wages of non-union employees are negotiated on an individual basis and wages of the union employees are specified by the local union.

All records and disbursements are centralized in the accounting department and are the direct responsibility of the company accountant. Time cards for workers paid by the hour are kept by the job foreman and are submitted to the accounting office weekly or at the completion of a job. On the basis of the time card, the accountant prepares a single check for each job. This check is cashed at a local bank and the money (in proper denominations) is "hand carried" to the job by the Job Superintendent.

Salaried and non-union employees receive pay checks weekly.

1.1.5 Employee Benefits

At present there is no written company policy regarding special employee benefits. The following has been the practice of the company in the past:

1. Holidays. Skyway recognizes for pay purposes all legal holidays for all employees working on the job the day prior to the holiday.

2. Vacation. A one week paid vacation is extended to all salaried employees who remain with the company for one full year.

3. Sick Leave. One working week or five days sick

leave per year is allowed each salaried employee. Should an employee become ill on the job before noon (11:30), the full day is charged as sick leave. After noon (11:30) only one half day is charged against the employee. This policy is applied loosely and tempered with good judgement.

4. Bonuses. No firm policy as to recipients exists regarding bonuses. In the past, bonuses have ranged from ten dollars to five hundred dollars.

5. Insurance. At present, only a few of the salaried employees are covered by group hospitalization insurance. There is a six months waiting period before any new employee may be legally eligible for this benefit. The company policy appears to be that of offering this benefit as an option in lieu of a pay raise.

1.2 Labor Relations

Skyway management is highly biased against construction unions. Management does recognize, however, that the associated and complementary industries do have strong unions and for Skyway to effectively compete in the roofing industry a working relationship must be maintained with the unions having jurisdiction. This recognition does not prevent the company from organizing its efforts and training its supervisory personnel to be company oriented rather than union oriented.

1.2.1 Skyway, Inc.

Skyway, Inc., is entirely non-union and must remain

so if it is to survive. The type of jobs contracted for by Skyway, Inc., are normally accomplished by small independent contractors who either do their own work or have only one or two assistants. As such, they need not be associated with the union and hence do not pay union scale wages. Therefore, should Skyway, Inc. employ union members it could not compete with the small independent contractor.

The unions evidently do not object to this arrangement as the size of jobs involved does not merit union attention. The efforts that would be necessary by the union to interfere would not earn compensatory return. This might even heighten antagonism toward the union by members themselves for, when union work is not available, members often turn to this type of non-union activity for their earnings until higher paying union work is available.

Skyway, Inc., is also used to train prospective foremen and superintendents for Skyway Roofing. Management has expressed the opinion that the union is unable to provide the type of personnel required for Skyway Roofing foremen and supervisors. Therefore, non-union workers are carefully observed for prospects who have the desired potential. Those selected are trained and, when considered capable of handling large industrial jobs, are shifted to Skyway Roofing. If they are shifted as foremen the company pays the necessary initiation fees into the union and if they are shifted as a superintendent they do not join the union. This policy provides

personnel who are well trained in company procedures and policy and are strong "Skyway" people rather than union people.

1.2.2 Skyway Roofing

The Capital District area has no separately established roofers union, but local roofers are included in LOCAL 83, Sheetmetal Workers Union. This is not the case in other areas in which Skyway does business and is true in this area only because there are apparently an insufficient number of roofers to warrant a separate organization.

In the construction industries, rather than the unions signing contracts with individual companies, there is a contractors association in the geographic jurisdiction of the union locals and it is with this association that the unions sign contracts. Therefore, when a company contracts to do a job in a location outside the area of its local's jurisdication, it must be familiar with the particulars of the contract in that area. The non-indigenous construction company need not sign the agreement but need only abide by it. Close scrutiny of these various contracts and sincere efforts to meet their conditions are an absolute necessity, for violations can cause many difficulties. Also, a close working relationship between a company's representatives, in the case of Skyway the Foreman and Projects Superintendent, and the local Business Agents greatly enhances harmony on the job. Should antagonism arise, the company is at the mercy of the Business Agent in that the agent decides who reports to which jobs and can therefore detail

the poorer workers to those jobs where antagonism exists. Poor relations cause strict enforcement of the contract, and thereby result in increasing the difficulty of the job. Conversely, when a good relationship exists, the Business Agent may overlook many of the smaller details of the contracts which can cause many headaches to the Foreman as well as cost money to the company.

It is the stated policy of Skyway Roofing that the company and its employees accede to reasonable union demands and thus avoid the difficulties outlined above. Heretofore, however, there has been no written policy delineating the extent of the authority of the Projects Superintendent and Foremen in dealing with the union without consulting the home office when disagreements occur. Thus, there has been recently, at least one incident of poor judgement on the part of a Foreman which has caused poor union relations. Also, news of the incident spread to other roofing locals and roofing companies which may cause some difficulties until such time as Skyway Roofing can repair union relations.

This incident highlights the need for firm company policy in the area of labor relations. All Projects Superintendents and Foremen must be thoroughly trained in the established company policy and included in this training must be an exact delineation of their authority for action without prior consultation with higher authority. They must also be impressed with the necessity for immediate notification to

higher authority when disagreements arise, so that an amicable and workable solution may be quickly reached.

Further, it is recommended that there be established in the home office a functional position wherein one person has the responsibility for being completely familiar with the labor agreements in all areas where current company undertakings are in progress and where bids are contemplated. This person would brief cognizant Projects Superintendents and Foremen before they go to the job and thus aid in preventing any untoward action resulting from a lack of knowledge of the union contract. Also, should disagreement occur, this expert would be available and knowledgeable in the aspects necessary for ensuring solution before damage results.

Basic to the establishment of such a position, however, is the necessity for higher management personnel to examine their attitudes towards the unions. Otherwise, any implied or stated negative attitude in this area may filter downward in the company and deleteriously affect daily working relationships. Unless such a reflective appraisal is accomplished, and remedial action taken to correct any defects in attitude, the designated Labor Relations Manager would be seriously hampered in establishing and promulgating a realistic stable company union policy.

1.3 Insurance

Skyway's insurance program has expanded as the company has grown, but in an inefficient and uneconomical

manner. The policy in the past has been to deal through two local insurance agencies who are underwriters for several insurance companies. As new assets were acquired, larger contracts received, and more workers employed, coverage was extended in a piecemeal manner which resulted in the use of five different insurance companies and a total of thirteen different policies.

A study of this insurance program was conducted and revealed the following:

1. Coverage could be increased at no additional cost by eliminating and negotiating for special considerations available with certain insurance companies. (Example: Insure only that inventory which is in stock; insure only those vehicles which are used during a 30 day period. An insurance company makes adjustment in premiums in accordance with a periodically submitted report).

2. Cost could be reduced by eliminating overlaps, consolidating all coverage under a single policy, and transferring the complete program to a Mutual Insurance Company.

3. A more economical, convenient service would be available where only a single insurance company is involved.

Four insurance companies were asked to submit proposals. Of the four companies, there were two mutual companies and two stock companies. The stock companies, one of which held a large portion of Skyway's insurance, elected not to submit a proposal after learning the identity of the com-

petitors even though it meant a possible loss of business.

An extract from the proposal of the successful bidder follows as Exhibit 1 in order to illustrate the savings in annual premium. This bid does not include company group hospitalization and New York State Workman's Compensation Insurance. The New York State Workman's Compensation, which accounts for an average premium of $7,500, will be transferred to the successful bidder at a date in the near future. This premium varies with the direct labor cost. Hospitalization is not extended to cover all employees and only a few of the salaried personnel are now participating in this benefit.

EXHIBIT 1

The following exhibit is for the purpose of comparing costs only. Assuming that the same coverage were written for the same policy year, this schedule will compare Employers Mutuals net costs with those of your present carrier.

COVERAGE	PRESENT COST	EMP. MUT. COST
1. Comprehensive General Liability including Auto	$ 9,073.77	$ 8,019.60
2. Workmen's Compensation (other states)	543.00	461.55
3. Contractors Equipment Floater ($53,100 Schedule)	531.00	478.00
4. Fidelity Bond	50.00	42.50
5. Money & Securities Broad Form	78.50	66.30
6. Fire Insurance	531.56	390.91
	$10,807.83	$ 9,458.86

Total Cost Reduction: $1,348.97

The cost difference is composed of the following elements:

1. Change of Fleet classification (Code CA5 to CA8) ..... $ 608.31
2. Dividends ..... $ 740.66

NOTE: The following were not included:

1. New York State Workmen's Compensation
2. Hospitalization

EXHIBIT 1

(CONT'D)

RECOMMENDATIONS

1. Your present liability coverage is written to insure against liability caused by "accident". Your coverage should be broadened by re-writing the "caused by accident" phrase to read "occurrence". Explained in more detail elsewhere in this proposal, the added cost for this coverage is about $108.00.

2. A 60 day blanket contractual endorsement should be included in your general liability coverage. Under this provision, you have 60 days in which to report a contract. In the meantime, you have coverage. This provision is at no additional cost.

3. You need coverage for non-owned and hired vehicles. For your present exposure the cost of this coverage added to your liability policy is about $43.00.

4. The "knowledge of Accident" and "Unintentional Errors and Omissions" endorsements can be added to your liability insurance at no additional cost.

5. Under the provisions of your present filing with the Department of Motor Vehicles, you are required to surrender your registration plates when suspending use of a vehicle. An "FS-2" filing will eliminate this, allowing you proper insurance credit for the suspension by notifying your insurance company. No surrender or re-purchase of plates is required when you return the truck to operation.

6. To adequately and accurately cover fluctuating stock and merchandise values for fire insurance, you need a more flexible policy. This is called a reporting form. Under this form, fire coverage can be adjusted by the month to coincide with changes in inventory. It is not possible to accurately estimate the savings here, but they should be substantial since you will be paying for insurance on the materials actually on hand.

7. Two separate policies, named Schedule Bond and Money & Securities Broad Form can be combined under one - A Schedule Crime Policy. No difference in coverage or cost - but more convenient for your records.

8. Recommendations concerning group insurance and umbrella liability insurance will follow in the near future.

1.4 Contracts

Skyway Roofing and Skyway, Inc., require a signed contract before work is started on a job. Skyway, Inc., uses a standard company contract form which is written in the rough by the Salesman and then typed and mailed to the customer by the office staff. The body of the contract contains a description of the work to be performed, the contract price, and space for various signatures. The terms and conditions are listed on the reverse side.

It is recommended that the policy of mailing contracts to the customers be abandoned in favor of personal delivery by the Salesman. This will give the Salesman an opportunity to explain the contract and answer questions. For additional details on this recommendation refer to the Skyway, Inc., Project Management Section of this report.

Skyway Roofing uses its own contract form for the smaller re-roofing jobs and that of the customer on the larger ones. It is often necessary to utilize legal assistance to interpret the contracts used by the customer. This is particularly true when Skyway Roofing is acting as a subcontractor. The Sales Engineers are responsible for writing the company contract which contains a detailed description of the work to be accomplished.

A review of signed contracts of both Skyway, Inc., and Skyway Roofing revealed that explicit financial terms were generally missing. For recommendations on financial

terms that should be included see the Accounting Section of this report.

1.5 Legal

Skyway obtains legal assistance from a lawyer employed on a retainer basis. This lawyer serves in a staff advisory capacity and, for a pre-established yearly fee, is available when required. His services have been utilized primarily, and almost exclusively, for interpretation of industrial contracts to ensure that these contracts are not unduly restrictive or prohibitively punitive to Skyway. Additionally, the interpretation ensures that the contract is written as the job was advertised and bid and that there are not unusual clauses therein.

Management has stated that it is their opinion that the fee of the lawyer presently retained exceeds the value of services rendered; however, no effort has been made to investigate the use of other lawyers. It appears that the company is uncertain as to its exact legal assistance requirements and, as a result, is unsure of the value of the assistance presently provided.

It is recommended that legal assistance be continued and that this assistance also continue to be in the staff advisory capacity. Further, it is recommended that this advice be utilized to strengthen contracts issued by Skyway, Inc., as applies to payments for completed jobs. If these contracts are sufficient in this area, advice as to legal

procedures which will speed payments for completed jobs should be requested. This latter action appears necessary in view of the expansion of Skyway, Inc., and the present dollar value of accounts receivable. Should this be allowed to increase in direct proportion to planned expansion, it is entirely possible that there may develop a lack of sufficient liquid funds to meet commitments. This will seriously hamper operations of the company. Plans should be developed now to prevent such a future eventuality.

1.6 Advertising

1.6.1 General

The advertising and sales promotion program for Skyway is handled separately for Skyway Roofing and Skyway, Inc. This is a result of the difference in the type of customer each division is trying to reach. The Sales Manager of each company is, for the most part, responsible for the advertising of his division. The Vice President, however, checks all promotional ideas and also contributes many of his own. The advertising programs for Skyway Roofing and Skyway, Inc., will be discussed separately.

1.6.2 Skyway Roofing

Advertising for the purpose of increasing industrial re-roofing sales, to be effective, must reach particular individuals within a prospective customer's company. These include plant owners, plant engineers, and purchasing agents.

Because roofing work is something a company might have done only every ten years, Skyway must keep its name and its special product, Monoform, before the company year after year. Skyway does this by using direct mail and trade magazines.

The direct mail approach appears to be the most effective. It normally consists of a series of three mailings. In the present series the first mailing contains a color brochure showing seven roofing jobs in seven different states. This implies that Skyway has a large multi-state operation. The second mailing will contain illustrations of the various General Electric Co., Inc. buildings that have been re-roofed by Skyway. This identifies Skyway with a large industry that would be somewhat particular in its choice of roofing contractors. The final mailing will contain information on metal protection. This impresses the customer with the definite advantages of the Monoform system.

The mailing list, containing about 7500 names, is taken from the salesmen's contact cards. The mailings, within a series, are spaced about a month apart and are addressed to the appropriate individual within a plant.

Salesmen follow up the direct mail with personal visits to the more promising customers. On these visits they use "pitch" books containing large color photographs of completed jobs. They also give interested customers additional brochures that explain the monoform system by the use of

pictures and samples.

Skyway Roofing advertises bi-monthly in four trade magazines: The Connecticut Purchasor, Connecticut Industry, New England Purchasor, and Industry (Mass.). They are also listed in the Buyers Guide of the above two Connecticut magazines.

Skyway Roofing does not have a budget for advertising nor is a record of advertising expenses maintained.

1.6.3 Skyway, Inc.

Skyway, Inc.'s advertising program presents a different problem. To be effective it must reach the home owner who requires exterior improvements or repairs to his home. As in Skyway Roofing, it is important to keep potential customers familiar with the name Skyway. The potential customer, however, is an unknown in this case. To reach this customer, Skyway has used television, radio, newspapers, billboards, and yellow pages advertisements. At this writing the latter three are in use.

The yellow pages ads and three of the billboards are a combination advertisement. They depict Skyway as an industrial and residential roofer. This combination probably has little influence on industrial sales but it does add prestige to the home improvement business.

Skyway, Inc., does not use an advertising budget. Funds are expended on an "as needed" basis.

1.6.4 Discussion and Recommendations

Skyway's advertising effort for the years 1962 and 1963 amounted to approximately 2.6% and 3.6% of sales, respectively. These figures, in themselves, mean very little, but they can be used for establishing future advertising budgets. Skyway Roofing and Skyway, Inc., should have a budget based on a percentage of the sales goal.

Skyway Roofing's direct mail program appears to be outstanding, but the results obtained are, of course, what is important. It is easy to assume direct mail advertising as being effective whether it really is or not. The volume of mail reaching the desk of a prospective customer is continually increasing. There is reason to believe that much of this mail is assigned to the "circular file" before it is opened. For this reason it might be beneficial for salesmen, when making calls, to ascertain whether the direct mail was effective. A record of this data should prove useful.

The advertisements in the four trade magazines were just started recently and it is still too early to determine their effect. If response is not forthcoming in the next few months, it is suggested that advertising be placed in only two of the magazines every month.

Cooperative advertising with the Flintkote Company might be worthwhile if it could be arranged. Besides reducing the cost for both parties it could aid Skyway Roofing in selling the Monoform System by associating the name Skyway

more closely with that of Flintkote.

Skyway, Inc.'s advertising program has in the past been relegated a subordinate position to that of Skyway Roofing. Only in the past few weeks have the programs really been separated on an equal basis. When using any advertising media, such as newspapers or radio, certain principles should be remembered. They are, as follows:

1. It is necessary to continually expose the prospective customer to advertising.

2. The length of time the advertising is remembered increases as the number of exposures to the advertising increase.

3. Remembrance also increases as the time between advertisement decreases.

4. The rate at which advertisements are forgotten is rapid.

In order to determine the effectiveness of the advertising program all prospective customers should be asked how they learned about Skyway. A record should be kept of this information.

There is another means of advertising that Skyway should consider. It is the news release which can, at no cost, draw public attention to the name Skyway. News releases can be prepared on such subjects as company anniversaries, accomplishments in sales, talks or speeches by company personnel, construction of new buildings or the opening of new branches, large contract awards, and many more similar items.

Good guidelines for preparing news releases can be found in The New Product by D. W. Karger, (New York: The Industrial Press, 1960).

Advertising, to be successful, must accomplish three tasks. First, it must contact the potential customer, next it must arouse interest and, finally, it should create preference. The advertising program which best accomplishes these three tasks will be the more successful.

CHAPTER II

ACCOUNTING

2.1 General

An introductory note of caution is considered proper for this most important aspect of accounting and finance.

The free enterprise system of this country fosters the growth of small independent businesses. However, there is always the inherent danger of their failure. In the December 1958 issue of the Journal of Accountancy an article entitled "The Accounting Function for Small Business" furnished the following statistics.

1. Approximately 350 - 400,000 new businesses are started annually while at the same time 300 - 350,000 are discontinuing operations.

2. Dun and Bradstreet's analysis showed the following causes of failures:

a. Incompetence	41.4%
b. Unbalanced experience (only 1 field)	19.2
c. Lack of management experience	18.2
d. Lack of line experience	12.8
e. Neglect	3.6
f. Fraud	1.7
Management Causes of Failure	97.5%
g. Disaster	1.2
h. Unknown	1.3
Total Causes of Failure	100.0%

3. All of the detailed reasons of failure can be condensed to these 3 basic themes:

a. Poor financial planning because of inadequate records or failure to use existing records.

b. Poor sales management, deficient product planning and market analysis.

c. Poor general administration culminating in added expenses NOT offset by additional revenue.

More recently, the 9 April 1964 Wall Street Journal under the headline of "BOOMING FAILURES" made the following reaffirming comments.

"Looking for big profits fast they bid hurriedly and low, assuming they'll hit no snags in doing the work."

"In many cases, bankers say such inadequate preparation is accompanied by inadequate financing."

"A New England structural steel fabricating company went bankrupt last year because the 'owner tried to run the business as he had years ago,'...." "He didn't know what his costs were; he kept winning bids, but he lost money on them."

"Another consultant believes such problems, caused largely by antiquated accounting, are responsible for a majority of failure of established firms. Things move too fast today for the old accounting systems that provided management with monthly reports in the middle of the following month."

This is not to say that companies cannot survive by following these poor management techniques, but the probability is extremely low.

At present, Skyway is a maturing and expanding company with an excellent financial rating which, by conscientious planning and operations, can continue to grow in its field.

It was noted that general company philosophy tended toward the original organizational structure of the proprietorship. This is highly understandable under the conditions of a closely held corporation and is commendable in some dealings of the company, however, there are many times when customers, creditors, and interested parties are more concerned with the corporate body and not with the individual. The fostering of a good corporate image may well hinge on financial supports which can only be obtained by the use of detailed financial statements to illustrate the soundness of the corporation. Accounting and finance are not ends in themselves, but, tools to serve corporate management to make the right decisions at the right time. They must also be so structured that they will have sufficient elasticity to grow with the company while continuing to provide the necessary day to day managerial data.

2.1.1 Company Background

It can be inherently dangerous to make specific recommendations based on a superficial examination of corporate

books or statements. The figures represent the culmination of many complex, interdependent actions of many people over a period of time. Many of these actions, though non-monetary, often result in financial repercussions.

Some of the problems that have added to the difficulty of making a proper financial analysis of Skyway can be summed up as follows:

1. Over the past several years, the corporation, in its rapid growth, has had several accounts and numerous sets of procedures. Though all of these basically served a particular purpose for the company at one specific time, they were highly inconsistent when a meaningful year-to-year analysis was attempted.

2. Annual statements prepared on a semi-accrued basis, converted from normal cash procedures, have varied from year to year as costs were assigned in a different manner for two successive years. In addition, informal records were used to prepare the formal annual statements and hence reduced the credibility of accounting data.

3. There is lack of an established set of policies or procedures to handle costing and recording of transactions. It appeared that accounting was often an afterthought, a recording procedure to document results, and was seldom used as an adjunct to active management.

4. Analysis of the profitability of the two companies was impossible because of a complete lack of cost

separation. Subjective opinion as to the separate profitability of either company could not be substantiated.

5. Attempts to compare total profitability with industry norms were either inconclusive or unsuccessful due to the obsolescence of published industry data or the complete lack thereof.

2.1.2 Capital Structure and Analysis

Due to the factors cited above, the figures shown on Page 2-II-6 are expressed only in broad terms and are for both companies combined. They may be used as estimates for future operations only after careful analysis of each is made before projection. These ratios are, at best, only indicators based on mechanical analysis and are not to be construed as firm criteria.

The proprietary ratio (percent Capital Equity), line 14, leaves ample provision for asset reduction before creditors would cease to be fully covered. This ratio, also, would allow for additional debt financing as an alternative to internal financing for any potential expansions.

The current ratio, line 27, appears to provide a substantial margin to cover present current liabilities, but it must be noted that part of this coverage is under accounts receivable which are a large proportion of current assets. In general, a review of the details supporting bad debts over the existence of the business indicates the company's lack of control has not been overly detrimental to the business.

COMPARATIVE BALANCE SHEET

		31 DEC 1962		31 DEC 1963	
1	ASSETS				
2	Current Assets				
3	Cash	11.9%		8.4%	
4	Accounts Receivable	65.0		63.8	
5	Inventory	1.7		2.8	
6	WID	4.4		1.2	
7	Other	1.4	84.4	1.2	77.4
8	Fixed Assets		15.6		22.6
9	TOTAL		100.0		100.0
10	LIABILITIES				
11	Current Liabilities		38.8		37.5
12	A/P				
13	Fixed Liabilities				5.2
14	Capital Equity		61.2		57.3
15	TOTAL		100.0		100.0

INCOME STATEMENT

16	SALES		100%		100%
17	Cost of Goods Sold		70.6		63.5
18	Gross Profit on Sales		29.4		36.5
19	Cost of Operation				
20	Officer's Compensation	3.8		3.5	
21	Advertising	2.6		3.6	
22	Office Sales & Salaries	4.9		8.3	
23	Other	9.2	20.5	13.3	28.7
24	Net Profit		8.9%		7.8%

25	Collection Period =	Year End Rec. / Aver. Daily Sales	67 Days	99 Days
26	Return on Equity =	Net Income / Equity	51.4%	32.1%
27	Current Ratio =	Current Assets / Current Liabilities	2.17	2.06
28	Liquidity Ratio =	Cash & Rec / Current Liabilities	1.98	1.92
29	Turnover of all Capital =	Net Sales / Total Assets	3.51	2.35

Most of the bad debts are disputed accounts which might have been minimized by either proper prior credit checks or an aggressive call back system to correct work deficiencies. This is an area of delicate balance where overly stringent credit policies could ultimately reduce sales and profits by adversely affecting customer good will. The high 1963 collection period, line 25, is partially covered by a large amount of accounts receivables reduced to cash early in January. These factors lend support to the recommended Skyway, Inc., credit policies.

Present inventory levels are not excessive. This is another area where judicious management control can provide extra liquid funds. Inventories are presently priced at actual cost. This is acceptable in view of a reasonable materials price stability and the low on hand volume involved. Present policies of direct ordering of materials to jobs and costing directly to work in progress are consistent with these pricing methods.

Usually, fixed assets increase in an expanding company. Caution must be used to see that funds tied up in these fixed assets do not overly limit operations or the company's ability to meet creditors' demands. Turnover of all capital, line 29, dropped largely due to the increase in total assets as a direct result of management decision.

2.2 Planning

As a growing corporate body, Skyway must integrate its operations. Part of the successful accomplishment of

these operations hinges on the planning that must take place before any action. Snap decisions without adequate consideration of all facets can easily lead to disaster. One portion of the planning includes the financial and accounting estimates of the impact managerial decisions will have on the corporations financial life line. As a vital staff officer, the accountant must participate in many management decisions. It should be his function to project future implications of proposed corporate decisions.

In order to assist management in making decisions, the accountant must be made aware of proposals in sufficient time to provide sound financial advice drawn from adequate financial records. Accounting systems and procedures must therefore provide the accountant with the necessary tools from which information may be collected, analyzed and evaluated.

It is recommended that all corporate actions that may have financial or accounting implications be thoroughly explored with the corporations financial advisor or accountant before the decision is made.

2.3 Accounting

Accounting facilitates the administration of the economic activities of the company. It measures and arrays the economic data and communicates the results to those who need the information.

Accounting systems must, of necessity, be both financial and management oriented. It must be financially

oriented, to provide information to persons outside the business, banks, creditors, and the government, and management oriented to provide internal information for the day to day operation of the corporation.

Few detailed techniques will be discussed in this report due to the fact that detailed implementation of policies and procedures advocated herein are well within the capabilities of the accounting personnel. Therefore, problem areas of policy and general procedures and their recommended solutions will be discussed.

Basically, accounting information should be used for planning and control. Within the control concept, it should provide motivation, communication, and a means of ascertaining the status of the operations. At present, accounting data is collected, but seldom used to its fullest potential. This results from the lack of firm guidance in the form of published policies and procedures, adherence to existing policy, assignment of responsibility, and authority to act in accordance with that responsibility.

2.3.1 Objectives

Accounting objectives may be stated as follows:

1. To collect only that accounting data which can be used for the management of the corporation or to comply with external requirements.

2. To establish a financial and cost accounting system that most easily and economically provides management

with the data it needs to:

a. Compute the cost of sales.
b. Provide a means of valuing work in process.
c. Measure the efficiency of men and materials.
d. Help eliminate waste and thereby reduce costs.
e. Provide some measure of industry wide comparison.
f. Assist in establishing bidding prices and standard prices per job.

2.3.2 Policies

Review of Skyway operations disclosed several problem areas basically created by either a lack of policy or an inconsistency of policy implementation. Each will be discussed briefly prior to related recommendations.

In accordance with past policy, there was no separation of accounting for the two separate corporations. Because of adherence to this policy, it was difficult to accurately determine the separate profitability of either company. It is possible that, contrary to commonly held opinion, Skyway, Inc., is contributing more than its share to the overall profit. This combined method of accounting could also create future labor problems if union representatives were to require accounting substantiation of wages paid to union employees. Separate accounting records would provide a clearer delineation of profitability and further substantiate the exclusive use of non-union labor by Skyway, Inc.

It is recommended that separate financial and

accounting records be maintained for the two corporations.

In a small single owner business, the cash method of accounting would normally be sufficient. As the business grows into a "true" corporation and becomes more complex, accounting requirements will change. For instance, other assets will become as equally important as cash. Accounts receivable will become an important part of the business and their management can have a definite influence on liquidity. Hence, it behooves the business to handle these assets officially and efficiently. This leads into an appraisal of accrual versus cash accounting. Many objections are raised as to the validity of cash accounting such as:

1. The distinction between expenditures to acquire assets, reduce debt or support current operation is unlikely to receive adequate emphasis especially if only simple cash receipts and disbursements statements are used.

2. Failure to pay bills on a timely basis for goods and services may be hidden.

3. A poor matching of expenditures and revenues (received as a result of these expenditures) may result.

4. Makes no provisions for balance sheet accounts, so that annual statements acceptable to the government must be converted to an accrual system.

Accrual accounting provides for formal recognition of revenues through the use of receivables and thereby matches them as truly as possible with the expenditures required to

produce such revenue. This represents a truer index of the success or failure of operations for that period. In the actual conversion to accrual accounting some unprofitable adjustments will have to be made, but, these can be minimized by converting at the end of the year when inventories (work in process) are low.

Accrual double entry system should therefore be adopted as standard for both financial and management accounting.

A review of the statements of accounts and the contracts supporting them has revealed several small problems. These problems, though each individually insignificant, can, when added together, represent a large sume of the business cash. Firm customer credit policies are apparently non-existent. This was compounded by the fact that normally the financial terms of the company and the customers agreement were not explicitly stated in the contract and therefore created inaccurate accounts receivables. Inconsistent billing policies coupled with indefinite work completion notification procedures further complicated billing and resulting payments. Occasionally customers were billed for work not yet complete, special arrangements agreed to were violated by early billing, and collections were made for work not recorded. Poor credit risks were accepted without question and added to the accounts receivable problems.

Procedures should be established to obtain a credit rating on all customers and results indicated on an internal

copy of the contract. The following firm customer credit policies should be adopted especially for Skyway, Inc., so that they are uniformly implemented by all Salesmen.

1. A standardized cash approach, under standard terms of 1/3 down with the return of signed contract, 1/3 on completion and acceptance with the remaining 1/3 within 90 days.

2. If terms under 1., above, are not possible, assist the customer in obtaining financing through an established reputable financial institution with entire amount due upon completion.

3. If deemed appropriate, finance internally in accordance with terms definitely stated in the contract such as a fixed percentage or service charge for installment payments after the initial 90 day period.

4. Terms agreed to and the detailed estimate of the work to be accomplished should be clearly and explicitly stated in the contract.

Billing procedures should be standardized on a monthly basis once notification of work completion to the customer's satisfaction is received by the central administrative office. Internal procedures should be standardized to insure that a uniform flow of all documents related to accounting is achieved so that all costs are collected and accurately recorded.

In the past, company personnel hesitated to use the existing financial records to ascertain the status of work, or project the costs for future work. Though historical in

nature, past costs coupled with estimated costs of the future (budgets) become valuable tools in the management control of the corporation. All planning should incorporate consideration of financial implications with accounting providing the necessary data. There must be active budgets, not just forecasts based on current conditions. Proper budgeting will predict where Skyway should be if they take a certain set of specific actions.

The system of financial control should provide for annual and quarterly budgeting.

This system should also provide for periodic control reports to include at least the following for the indicated corporations:

	SKYWAY ROOFING	SKYWAY, INC.
DAILY	Labor Report from Superintendent to Project Manager and accounting.	Labor Report from Expeditor to accounting.
WEEKLY	Direct Labor Summary from accounting to Projects Manager and General Manager.	Direct Labor Summary from accounting to General Manager.
	Cash Balance from accounting to General Manager.	Cash Balance from accounting to General Manager.
	Job Cost Summary from accounting to Projects Manager and General Manager.	
MONTHLY	Income Statement to management.	Income Statement to management.
	Budget Variance Analysis to management.	Budget Variance Analysis to management.
	Balance Sheet to management.	Balance Sheet to management.

QUARTERLY Quarterly, Budget, Income Statements, and Balance Sheets to TOP management.

Nebulous definition of authority without controls has permitted many people to take actions which have had serious financial impacts (i.e., purchasing). Where responsibility is assigned it must be accompanied by the authority necessary to take action in accordance with that responsibility. Conversely, extremely tight controls for all actions, major or minor, can, likewise, create interference problems.

Firm guidance relative to the exercise of all financial matters should be established. The accountant should be assigned the responsibility and the authority to judiciously exercise financial control subject to corporate guidance. In addition, the authority should be granted to handle routine financial matters (i.e., payroll, etc.), without recourse to higher authority.

2.3.3 General Accounting

General accounting systems are designed to provide the basic information for external reporting and also furnish the skeleton around which a cost accounting system can be constructed. General accounting's main functions are to classify, record, present, and interpret the financial actions of the corporation. Common accounting practices, well known to the financial advisor and accountant, are more than adequate to cover general accounting requirements.

The chart of accounts will have to be realigned in

accordance with the recommendation for separate accounting for both companies, the organizational structure and the cost accounting system. In the past, it was relatively laborious to ascertain costs accrued on any one job up to a specific point in time. The use of double entry accounting and a job order cost system can provide timely information on job cost accrual.

2.3.4 Cost Accounting

The cost accounting system is designed to classify, record, and present the material, labor, and overhead aspects of the service performed. It is the key to control because it works with costs, budgets, and cost analysis.

Cost accounting should provide a means of:

1. Determining costs and profit for the period.
2. Creating work in process values for costing.
3. Aiding in the creation and execution of budgets.
4. Establishing control for cost improvement.
5. Analyzing the cost impact of alternative courses of actions.

Two basic cost accounting techniques are available for consideration, absorption and direct costing. Each has its specific advantages and uses. After detailed consideration of the proposed organization, the type of service performed, and technical reports such as the National Association of Accountants Research Report #37 of January 1, 1961 entitled "Current Application of Direct Costing," it is recommended

that the company retain its present direct costing concept. Refinement will be necessary to tie the system together and make it more responsive to management's needs and yet separate it so that it will serve two separate companies. This is predicated on the concept that the period costs are incurred mainly to maintain a capacity to perform a service and a readiness to sell this service. Because the proposed organization is structured with a central administrative office (i.e., overhead), these costs are generally incurred in providing capacity independent of the volume of sales of either company. Allocating these centralized costs over some reasonable unit of production would make budgeting difficult. With direct costing, the effect of taking a new job can easily be determined as to its contribution toward meeting the period costs. This is advantageous in a seasonal business. It also precludes having to accurately define normal capacity in order to allocate overhead. It is highly adaptable for the analysis of the cost-profit-volume relationship, budgeting, and profit planning.

To improve cost control, a basic standard is essential. This is the estimates or salesmen's cost estimates to perform a job. This estimate must be recorded in sufficient detail to provide a target for controls. This is required regardless of the type cost accounting system utilized.

All estimating procedures should be standardized in method and documentation in order to provide cost targets for operational performance.

Costs which vary by locale of operation, such as union labor rates, compensation and benefits, can be ascertained and made available as actual rates to be used by the Estimator in his work. The validity of Skyway, Inc., standards can be measured via documented estimates and cost reports, and adjusted as necessary to insure a stable profit level.

An integral part of a cost accounting system is the use of budgets. It is the basic technique for profit planning. Budgeting involves setting the targets for all responsible sections based on past history and an educated evaluation of future desires based on forecasts. With these targets officially recorded, the cost control system can periodically compare actual versus planned costs. Investigation should reveal the reasons for any deviations. Corrective action can then be instigated, based on the results of the investigations.

A budgeting system should be incorporated as an inherent part of the direct cost accounting system.

Within the direct cost system both types of overhead should be isolated and reported so that both administrative and job production variances can be assigned to the individual responsible for corrective action.

Money expended, to collect control data which is never used, is wasted. It would be better to develop a simpler system that would be actively used by management than to adopt an all inclusive highly detailed one that is completely ignored.

2.3.5 Office Procedures

Office procedures can be one of the major problems of any business and Skyway has found this to be true. They have many forms in existence, but few are actually used. Procedures have supposedly been established, but, in general, are ignored. The recent acquisition of the machine accounting equipment and procedures of a similar company will greatly assist in implementing internal accounting procedures. It should allow the accountant more time from the routine work to perform required advisory and analytical functions.

Once the accounting systems have been specified and established, all of the procedures should be documented in a manual. This manual can then be used to provide all personnel with the standardized methods of performing work and to train new personnel.

An operational procedures manual should be prepared and maintained to standardize the handling of all internal operations.

Accounting and financial subjects in this manual should include:

1. Budgeting, procedures and responsibilities.
2. Payroll procedures.
3. Flow charts to cover internal document flow.
4. All standard forms used and how they should be processed.
    a. Accounting records.

b. Cost Analysis Sheets.

c. Expense accounts.

d. Contracts.

e. Estimates.

f. Statements.

g. Reports.

5. Established credit, billing, and cash policies.

6. Methods of handling expense accounts.

7. Methods of handling bonding.

8. Inventory control and evaluation procedures.

9. Accounting policies and procedures.

10. Maintenance of records.

Procedures take time to develop and test, redefine, and use again. Some of the records and procedures presently used are more than adequate and should be retained, such as:

1. Accounts payable procedures for taking discounts, as appropriate, and holding the balance of payables for normal monthly payment.

2. General accounting procedures are acceptable though they must be converted to the recently purchased business machine.

Several areas require additional detailed study and consideration. These are:

1. Bonding of internal employees to cover the handling of routine cash and financial matters without direct contact with top management.

2. A voucher system to cover purchasing and accounts payable.

3. Inventory controls and accounting for materials actually used on jobs.

4. Centralized records for general use to eliminate the myriad of small unofficial documents being used.

In view of the above general comments and the time it takes to train people, it is recommended that a target date of 1 January 1965 be established for a complete shift to accrual accounting methods and the adoption of standard procedures to be used by all personnel.

2.4 Organization

The Board of Control has available a financial advisor, on a part time basis, capable of providing financial advice and annual audits of procedures and records. Internally the financial and accounting function is to be handled by the accounting section of the Central Administration.

This accounting section should provide the corporation with the following services:

1. Maintenance of the financial and cost accounting systems that provide management with timely, accurate information on which to base decisions.

2. Advise and assistance in the preparation of periodic operating budgets and subsequent evaluations.

3. Provide the corporation with general financial and accounting advice in all areas having financial implications.

The present organization, with the addition of a full time cost accountant, would be capable of providing the above services if they can devote full time to their duties. Job descriptions for the functions envisioned, as provided in Part 1, will augment the organizational chart and the information included herein.

CHAPTER III

MATERIAL CONTROL

3.1 Physical Assets

The physical assets of Skyway represent a rather sizable capital investment even though much of the equipment was purchased used and the major portion of the labor utilized in new construction and re-modeling of company buildings was done with company workers.

In the company building complex, there are four major structures consisting of the home office, two warehouses, and a metal shop. This property is well located and suitable for expansion, which is important since additional construction may be necessary if the company's growth expectations are realized.

No attempt will be made to describe the rental spaces of the branch offices since no visual inspection was made.

A description of Skyway's buildings follows:

1. Home Office. This building was formerly the home and company office of the corporation owners. In 1960, a renovation program was accomplished in which the entire building was converted into office spaces. The surface leval contains the offices of the Vice President, Purchasing Agent, Sales Managers, secretary and miscellaneous spaces. The basement contains the offices of the Projects Manager and accounting department.

For the most part, this building presents a good appearance both internally and externally. The layout is functional and the office space, equipment, and machines meet present requirements. There is an unexplainable tendency to mar the business-like appearance of the interior of this building by using certain areas, such as the entrance to the basement and a sizable portion of the basement as a storage area for roofing materials and assorted material samples. There is space available in either of the two warehouses for storing this material.

2. Main Warehouse. The main warehouse is an excellent concrete block structure located in front of the main office. There are 7,500 square feet of floor space which provides adequate area for the company's presently contemplated expansion plans. This structure has a concrete floor and large double doors at each end capable of admitting the largest company-owned vehicle. Large, triple doors are conveniently located for access to loading docks. At present, this warehouse serves as a materials and equipment storage area and vehicle maintenance shop. A small partitioned area in a corner of the building provides security for small pilferable items. Although the materials and equipment are presently being stored in a disorderly manner, a company study has been made and plans implemented to correct this deficiency.

3. Small Warehouse. This is a small frame building located directly across from the main office building and

serves as an additional storage area. In the past, this building has not been utilized to any great extent; however, the warehousing plans mentioned above are expected to bring about a more efficient utilization of this asset.

4. Metal Shop. The metal shop is a converted garage adjacent to the main office building. The total floor space is approximately 900 square feet. This building houses all the equipment and raw materials used in fabricating metal components such as gutters, fittings, drain pipes, etc. The requirement for large equipment and long work benches leaves only a modest amount of space for raw materials and finished inventory storage. Large sheets of metal are to be found leaning against walls and lying on the floor. Finished products are stored in a haphazard manner throughout the shop.

Aside from the shortage of floor space, the next most undesirable characteristic of this building are the height of the ceiling and position of up-right bracings. The ceiling is several feet lower than is adequate to allow free movement of materials and long bulky finished products. The ceiling bracing restricts movement of materials in the horizontal plane and increases the work requirements.

It is understood that future construction plans of the company include either replacing this building or constructing an addition.

3.2 Purchasing

The purchasing function at Skyway is performed by

the Purchasing Agent. Purchasing, as such, is only a small part of his job. He is also responsible for inventory control, determining material requirements for each Skyway, Inc., job, assigning workmen to Skyway, Inc., jobs, taking all outside phone calls when the secretary is absent, and managing the rolling stock and equipment.

Purchasing procedures and the related material flows are diagramed on Page 2-III-6. An explanation of this diagram will give the reader an understanding of Skyway's purchasing methods.

The request for material for Skyway Roofing jobs originate with either the Sales Manager, Project Superintendent, or the Vice President. The Foreman may also initiate a request for additional materials needed on a job. Skyway, Inc.'s request comes from the Salesman who sold the job. Many times this is in the form of a drawing and a description of the job. The Purchasing Agent determines the proper amount of materials. A purchase for inventory may be initiated by the Purchasing Agent.

When large quantities of materials are needed they are shipped from the vendor direct to the job. This by-passes the inventory card system. On smaller orders the material is withdrawn from the warehouse. In this case an entry is made on the running inventory card and a warehouse release order prepared.

Purchases are made by mail or by phone with a mail

follow up. The purchase order form used has a white and a yellow copy. The white copy is mailed to the vendor and the yellow copy is filed until the invoice is received at which time it is discarded. Invoices, receipts, and warehouse release orders are temporarily filed under the job name before being forwarded to accounting.

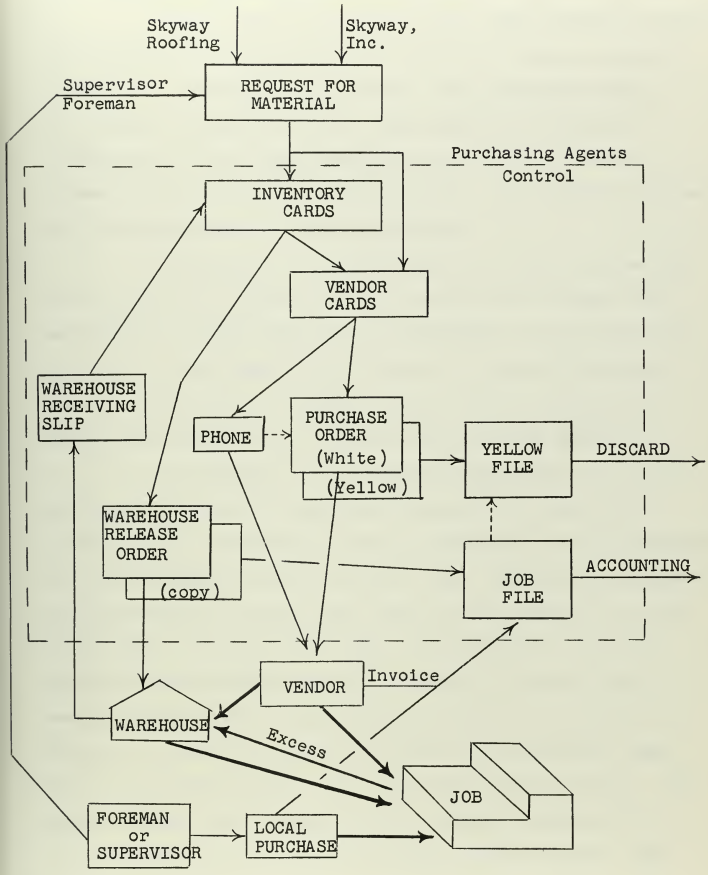
The Foreman on a job is authorized to buy locally, needed items out of a petty cash account. These purchases are reviewed by the purchasing agent.

On the completion of a job, the excess material is returned to the warehouse. A receiving slip is given to the Purchasing Agent who records the data on the inventory cards.

The purchasing procedures that have been described appear to be adequate for Skyway. It is, however, recommended that these procedures be reduced to writing to avoid a breakdown in the system during an unavoidable absence of the Purchasing Agent. It is also recommended that Skyway, Inc., provide the Purchasing Agent with a material requirement list vice a job specification and drawing.

3.2.1

PURCHASING PROCEDURES



3.3 Inventory Control

During the first month of this study, inventory control was handled very informally. No inventory control cards were used and no inventories were taken. The Purchasing Agent, who handles inventory control, would check the warehouse occasionally to see what materials were needed. If there seemed to be a shortage, he ordered more. The quantity ordered was determined from his past experience.

Subsequently, a formal inventory control system has been initiated. Inventory control cards were obtained and a maximum and minimum stock level established for each material. An inventory was taken of the materials on hand to use as a starting point for the system. There is also a program to store the materials in a systematic and orderly manner.

An inventory control system should have as its objective the buying and handling of materials at the lowest overall cost. To accomplish this, a procedure must be developed for determining when and how much to buy. This is accomplished by determining a reorder point and an order quantity for each individual inventory item. There are mathematical methods to define these quantities but in Skyway's situation they would be impractical. The reorder point can be estimated by knowing the time for required delivery and approximate usage for an estimated period. This will vary with the season. The order quantity will be based on the discount received for volume buying, the unit cost of items, and the season. The

unit cost of a material should determine the degree of control to be exercised. There is very little savings in closely controlling an item such as roofing nails, but a large sum of money could be tied up by not controlling the inventory of asbestos felt rolls.

In view of the above, it is recommended that a seasonal reorder point and order quantity be used for high value materials and a single maximum and minimum point be established for low value materials.

3.4 Vehicles, Rolling Stock, and Aircraft

3.4.1 Trucks and Automobiles

Skyway presently owns and operates twenty-six motor vehicles, of which nineteen are trucks used in transporting materials and equipment to and from the job sites. The policy in the past has been to purchase these trucks in either new or used condition depending on the intended use, the used vehicles being utilized locally and the newer ones being used for jobs not within the immediate area. This practice, and that of registering for use only selected vehicles during slack business periods, resulting in a gross imbalance of use, is financially practical due to insurance considerations.

Until recently, no maintenance or operating cost data had been kept. An attempt was made to obtain similar cost data from truck rental agencies for the purpose of a replacement analysis. However, the results were not favorable

since the cost maintenance methods of these agencies differ materially from those of Skyway. Also, maintenance cost data on individual trucks were not maintained by the agencies. Furthermore, these agencies tended to emphasize high maintenance cost for individual ownership.

With such data now being kept by Skyway's maintenance section, it should be possible to make a meaningful replacement analysis within the next two years. Until necessary data has been accumulated, no accurate statements regarding purchasing and maintenance practices can be made.

Skyway owns and operates seven company cars for sales and promotional work. Two new "compact" cars were purchased in March of this year. In addition to using company cars, some sales personnel drive their personal vehicles and are compensated by the company for their use.

Since operating and maintenance data have not been kept by the company until recently, no replacement analysis to determine proper replacement and maintenance policy was practical.

3.4.1.1 Maintenance

Skyway has no well-defined maintenance program for any of the vehicles. The practice has been to conduct "breakdown" maintenance, although a full time mechanic is now employed to do some "preventive maintenance" as well as repair work. With the absence of concrete maintenance data, an adequate preventive maintenance program appears to have little chance

of success. There is a tendency on the part of Skyway's management to resist any maintenance cost where the need is not obvious.

In the near future, the full time mechanic will begin training in the uses of Monoform equipment. Whether this mechanic will be able to accomplish any kind of maintenance program is questionable, however, the cost records he is expected to keep for a future replacement analysis can certainly be expected to deteriorate.

3.4.1.2 Lease or Buy

Proposals were obtained from truck and automobile leasing companies to determine the feasibility of vehicle leasing. The quoted prices of leasing were not considered favorable, although an actual comparison was not possible due to the many variables involved.

The cost of leasing a truck or car begins with a fixed monthly rate for the type and model vehicle desired. An additional charge is made for mileage exceeding a fixed maximum. The fixed monthly charge also varies with the length of time the company is willing to keep a vehicle. Normally, this is two years for cars and five years for trucks.

The following will serve to illustrate the variance between owning and leasing an automobile for a two year period. Truck rental had a more unfavorable variance, but since the degree of accuracy of estimated data is so low, the calculations are not reported here.

BUY		LEASE
$2,600	Actual Cost	$115 monthly rate (plus 2¢ per mile in excess of 48,000 miles).
510	Insurance	
180	Lubricants (est.)	
30	Licensing	
240	Tires (est.)	$2760 Fixed Total (2 yrs)(est.)
300	Maintenance (est.)	240 Additional Mileage
$3,860		$3,000 Total Cost Per Car for Two Year Period (est.)
- 1,600	Resale (est.)	
$2,260	Total Cost Per Car For Two Year Period	$370 annual variance (est.)

NOTE: Value of capital released by leasing not considered.

3.4.2 Monoform Tankers

Skyway now owns four Monoform tankers for transporting Monoform material to the job sites. Ownership of these four tankers, varying from 5,000 to 6,500 gallons capacity, makes it possible for the company to purchase and store large quantities of this material, resulting in a convenience and cost savings.

3.4.3 Aircraft

Skyway is a fifty-percent owner of a Cessna 195, 4-place, single engine aircraft. This aircraft is hangared at the Troy Airport and flown only occasionally by the Vice President and the co-owner. There are no fully qualified pilots (in type) with the company at present, however, the Vice President expects to "instrument qualify" and make extensive use of this aircraft for business purposes at some future date.

3.5 Field Operations

The two Skyway corporations are sales oriented

companies, dealing in a service rather than a product. Methods of selling, estimating, contracting, engineering and job/projects management are covered in parts Three and Four of this report. This Chapter will be concerned primarily with men and materials handling on the job.

Recent changes in the Skyway companies have made field operations far more complex than in the past. Expansion of the industrial roofing and construction operations into several states and broadening of the home improvement effort to several times the previous area of operation have made operations increasingly difficult to control. As distance increased, management's control over men and equipment (the most costly element of a construction job) correspondingly decreased; therefore, the need for a standardized "field operations procedure" became paramount if efficiency was to be maintained.

The procedure presently being used by each corporation is discussed below.

3.5.1 Skyway Roofing

Field operations begin soon after contract procurement. A six-phase system for dividing work into a logical sequence has very recently been instituted. The adoption of this system of phases appears to be excellent, not only from a standpoint of covering all of the minute operations with a minimum of effort and control, but also for providing a convenient check-off list that can be revised periodically to cover gaps and

overlaps as more is learned in future operations.

The phases discussed are not meant to be all inclusive in detail, but, are general summaries of the procedure.

1. Mobilization. Mobilization begins directly after a pre-planning conference at which all aspects of the job contract are discussed in detail. Participants in this phase are the Projects Manager, Sales Engineer, Project Superintendent, and job Foreman. During this phase all vehicles to be used in the initial movement to the job site are selected; the bill of equipment is loaded; that portion of the bill of material held in inventory is loaded; and plans for movement to the job on a specified date are formalized. The drivers and any Skyway personnel to be utilized on the job are selected. Copies of blueprints, shop drawings, job instruction sheets, time cards, job costing information cards, and other papers necessary for field administration are completed and given to the job Foreman. Also, orders for items included on the bill of equipment of "in progress" jobs are issued to job foremen. Finally, actual movement to the job site is commenced.

2. Materials Handling and Set-up. Prior to the actual date of loading materials and equipment, the Project Superintendent takes a tour of the new job site to determine the best possible placement of these items. Since rental on certain types of material handling equipment is very costly, the timely acquisition and optimal placement of this equipment for maximum utilization must be determined in advance.

An example of this is the use of a crane which may cost more than one hundred dollars per day. The positioning of such a piece of equipment must be dictated by such factors as the number of levels of the building structure to be served; that is, positioning the equipment so as to be able to lift material and equipment to all levels without repositioning. Access to the equipment from at least two directions is most desirable since this will allow trucks to approach from both sides so that when one truck is unloaded the other will be ready, thereby incurring no delay.

In roofing work, setting up or positioning materials on the roof so as to minimize unnecessary moving and re-handling is accomplished during this phase as well as preparing the work area and positioning "ground to roof" handling equipment such as conveyor, hoists, ramps and asphalt kettles.

3. Application Phase. Application begins where "set-up" ends. This phase is carried out in accordance with the predetermined method of application as specified by the job contract.

The method of application is always subject to review. It is the responsibility of the job Foreman to recommend changes in methods and materials when the need seems justified.

4. Inspection and Completion. This phase consists of the "cleaning up" of minor details of the job and the final inspection by the general contractor or client in company with

the Projects Manager. At this stage a "punch list" is made up. This list consists of all items the general contractor or client feels have not been accomplished in complete accordance with the specifications of the job. The Projects Manager and Project Superintendent review the "punch list" with the job foreman to determine the responsibilities of Skyway in completing the items listed. If agreement is not reached concerning an item on the list, negotiations are commenced with the general contractor or client to fix the responsibility in accordance with the contract and/or obtain an "extra" work order to complete the items.

Satisfactory completion of the "punch list" signifies acceptance of the job by the general contractor or client.

5. Tear-down. After completion of the job, all excess materials and company equipment are checked off against the original bill of materials and bill of equipment and readied for movement. Transportation requirements for movement are submitted by the job Foreman to the Project Superintendent, who in turn is responsible for informing the Projects Manager of these transportation requirements.

6. De-mobilization. In this final phase, all equipment in need of repair and all excess materials are loaded and returned to the home warehouse. Other pieces of equipment which have become a part of the bill of equipment for another job are dispatched to that job. This procedure assures

minimum down-time and transportation costs. All other equipment is returned to and stored in the company warehouse.

3.5.2 Skyway, Inc.

Skyway, Inc., does not have a well defined field operations procedure. The nature and size of the contracted jobs (average being $600, and requiring two or three workers) rarely requires high level conferences or top management decisions. For the most part, only the Salesman, Branch Manager, Purchasing Agent and Expeditor are involved, and then, only in a routine manner.

A typical job proceeds as follows:

1. A "lead," usually resulting from a telephone call placed by an interested customer, is given to a Salesman. The Salesman discusses with the customer the nature of work desired, such as, re-roofing, siding, room addition, etc. All information pertinent to the job, including a rough sketch of the work place, is written on a work sheet. On the basis of this information, the Salesman estimates and bids the job. (The remaining steps assume that the bid was acceptable to the customer and company).

2. The office secretary types the description of the job and certain other routine data, in duplicate, on a work sheet.

3. These typed work sheets along with a sketch (when required) of the job are reviewed by the Branch Manager.

4. The Branch Manager passes the work sheets and

sketch to the Expeditor who lists the materials and equipment needed, obtains a building permit, and assigns workmen.

5. The Purchasing Agent orders the materials and extends the unit prices on the company's copy of the work sheet.

6. On the specified date, workers, materials, and equipment are dispatched to the job site.

7. Upon satisfactory completion of the work, the Supervisor or Salesman obtains the signature of the customer on a completion certificate.

The above refers to a typical job in the Troy area. At branch offices, the same procedure may be followed, however, fewer people are involved and also, the job will be subcontracted to workers in that area. During peak periods, some subcontracting is necessary in the Troy area, although every effort is made to keep the "regular" workers employed before subcontracting is considered.

PART 3

SKYWAY ROOFING CO., INC.

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PART 3

SKYWAY ROOFING CO., INC.

CHAPTER I

SALES

1.1 General

The sales function of Skyway Roofing is accomplished by the Sales Manager and three Sales Engineers, or Branch Managers as they are now called. The Vice President also participates, to a rather large extent, in the sales effort.

Skyway's primary selling effort is directed toward re-roofing using the Flintkote Monoform system. New construction is also sought, but on a much more selective basis. Besides roofing, Skyway installs corrugated asbestos siding and performs general waterproofing and metal protection work.

In the past three years the company has expanded its sales area from the tri-cities area to include all of northeast United States. As a result, sales for this period have doubled.

Skyway Roofing has outgrown the typical concept of a small roofer in the industry, that of a small family business serving their local area.

1.2 Sales Manager

Skyway Roofing, as is stated in previous chapters, is a sales oriented organization. This puts a heavy burden

burden on the sales force, particularly the Sales Manager. He is responsible for developing and implementing sales plans and policies, as well as supervising the training of Sales Engineers and working his own sales area. He is also responsible for the advertising program of Skyway Roofing.

The three Branch Managers are presently located in Troy, Boston, and Waterbury. These men are the nucleus of the branches being established at these locations. The Sales Manager normally spends about three days each week at the branches providing on-the-job training by accompanying salesmen on their calls.

The Branch Managers submit their job estimate sheets and tentative contracts to the Sales Manager, who reviews them and applies the proper markup. Any errors found are discussed in detail with the manager.

Over the past few years, the Sales Manager has developed a very efficient customer contact card system. His goal is to have, for Skyway's marketing areas, a card for every company or institution that has a building large enough to reroof using the Monoform system. To accomplish this he has used Lovejoy's Guide to Colleges, The Industrial Directory of New York State, Sweet's Catalogue, and Chamber of Commerce listings. Where the number of employees is included in these listings, companies with less than fifty are eliminated on the assumption that the majority have small plants. The F. W. Dodge Service ("Dodge Reports") is used as a prime source of

new construction information. Herb Ireland's Sales Prospective, a monthly publication, is also used to gain information on proposed new construction. The actual data contained on the cards and their use will be explained in a later section.

The Sales Manager should recommend to the General Manager yearly sales goals for Skyway Roofing and for each branch. A chart should be kept showing the progress toward these goals. This and other methods could be used as tools to encourage competition between branches. Some type of incentive system such as a bonus, should be given for reaching assigned goals.

1.3 Branch Managers

At the present time the three Branch Managers make up the total manpower of the branches. They are still considered to be in a training stage, thus requiring substantial support from the home office.

Branch Managers determine their own daily sales-call schedule using customer contact cards for their territory. The front of each card contains the plant name, address, phone number and the company official (by name) who would normally handle re-roofing projects. The reverse side contains a record of sales calls and jobs completed. Each card is also color coded to help the Manager determine whether any special attention should be given a particular customer. The color code is as follows:

GREEN ..... Bid is out to the customer.

RED ..... Take action - wants a bid.

GOLD ..... Sold account.

BLACK ..... Bid made but did not get the job

BLUE ..... Multi-plant account.

PURPLE ..... No information on account.

ORANGE ..... 1965 (or future) lead.

As he makes his rounds the Sales Engineer will be able to discard some of "no information" cards by looking at the type of structure the company has. He will also be able to add cards when he locates potential customers not listed. Any changes or additions are reported to the home office so that the necessary corrections can be made in the advertising mail list.

The Branch Managers are furnished a company car and a gasoline credit card for use in their sales work. In addition, they are reimbursed for overnight and entertainment expenses. No limits have been set on the amounts that can be spent. With the present Managers, a limit does not appear to be necessary.

It is suggested that the Branch Managers submit a periodic report listing the calls made during a period.

1.4 Selling

1.4.1 General

Skyway Roofing, unlike many roofers, is very aggressive

in their selling. They are unwilling to passively wait for the customers to call as seems to be normal for the trade. They were one of the first roofers to emphasize a relatively new and untried product - the Monoform system. This system, with its impressive gun applicator, has given the Salesmen something unique and glamorous in appearance to present to prospective customers.

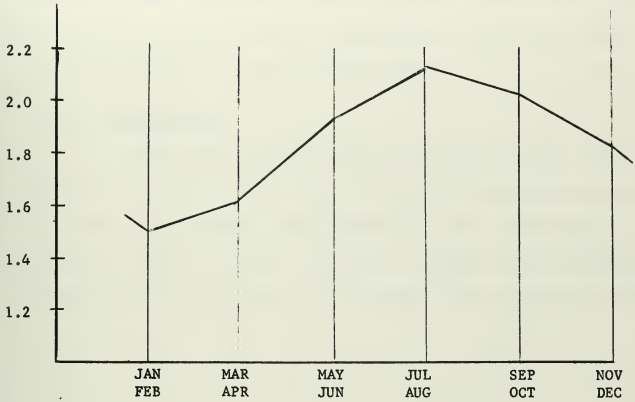
Skyway Roofing's sales are very seasonal compared to the construction industry. Page 3-I-6 shows the seasonal variation of the construction industry and Skyway's variation for 1963. In order to reduce this variation the "off season" selling effort should concentrate on new construction.

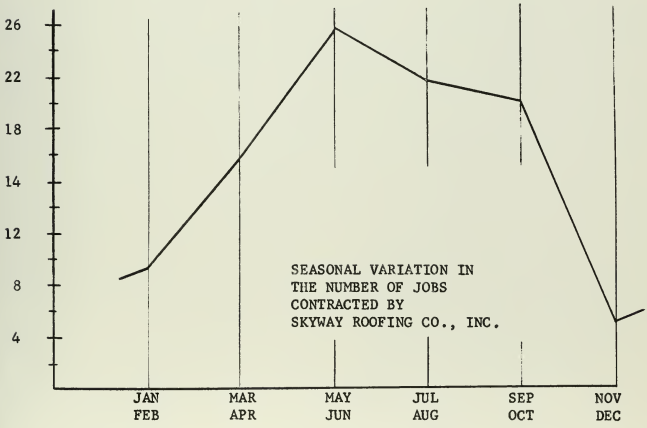
Most of the selling in the past few years was performed by the Vice President and the Sales Manager. Now that the company has increased in size and added Branch Managers it is recommended that the Vice President gradually reduce his direct sales functions. The Sales Manager should also become less involved in direct sales (i.e., not have his own sales area) as Branch Managers become more fully trained.

For the year 1963 the ratio of successful bids to bids submitted was approximately 1 to 5. The dollar ratio was approximately 1 to 6. The average successful bid was approximately $6300 while the average bid lost was approximately $8100. The two ratios given above were calculated from available information which probably does not include a number of telephone bids made and lost. The higher dollar ratio and

1.4.1.1

SEASONAL EMPLOYMENT VARIATION
OF GENERAL BUILDING
CONTRACTORS [1]





1. Monthly Labor Review, April 1964, p. 463

average results from losing the large bids and winning the smaller ones. The use of an experienced estimator for large re-roofing jobs and all new construction jobs would help reduce the number of bids lost each year.

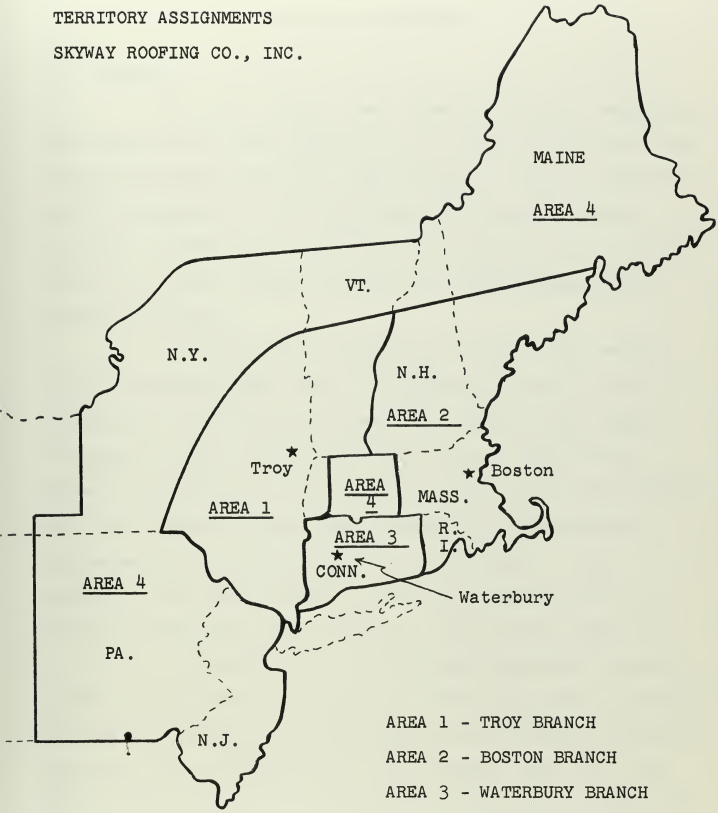
1.4.2 Territories

The sales territory and its divisions are shown on Page 3-I-8. Most of the sales effort is being concentrated in areas one, two and three because of their proximity to the home and branch offices. The Sales Manager and Vice President cover area four and parts of the other three areas as necessary.

1.4.2.1

TERRITORY ASSIGNMENTS

SKYWAY ROOFING CO., INC.



AREA 1 - TROY BRANCH

AREA 2 - BOSTON BRANCH

AREA 3 - WATERBURY BRANCH

AREA 4 - NOT ASSIGNED

CHAPTER II

PROJECT MANAGEMENT

2.1 General

Up to the present time, Skyway Roofing has emphasized the marketing and sales aspects of its business, with only the minimum necessary attention being devoted to proper industrial project management or the production planning and control function. During the relatively brief period of this seminar study the Project Manager function has been nominally performed as follows:

1. First, by an individual extremely well versed in the journeyman knowledge and engineering aspects of the roofing and construction business but lacking in the broad viewpoint, finesse, and coordinative ability required by Skyway's management in this position. This individual abruptly left the company, in less than satisfactory circumstances, approximately two months after the commencement of this seminar. The seminar group felt that this individual's experience should have been retained in some company capacity.

2. Secondly, by a business and management graduate student on a planned interim basis. This individual, presently on academic leave prior to entering Harvard Business School in September, was supposed to give new insight, stability, and organization to the Project Manager function, to alleviate the workload of myriad project details previously handled by the Vice President, and to prepare the Project Manager position

for proper turnover to a prospective permanent Project Manager, who would assume the position upon graduation from college in June. Although demonstrating capability in the management aspects of the position, the business graduate student was seriously lacking in experience of the trade and a knowledge of roofing and construction details. After approximately one month of very active involvement as Project Manager and participation in many other facets of the business, this graduate student was shifted from the Project Manager position to serve primarily as a management consultant until September. The seminar group felt that the introduction of this construction business neophyte into a position of line authority in many of the affairs of the business was a questionable decision, as was the contemplated hiring of another college graduate for the position. What is needed here is a mature, experienced construction man having management capabilities.

3. The Project Manager position is vacant at the time of writing this report. Advertisements have been placed to solicit applicants to fill this job on a permanent basis, probably with an individual similarly as well versed in the trade as was the original Project Manager, but also possessing a high capability for management and administrative functions.

The above summary emphasizes the degree of instability and disorganization which has been characteristic of the Project Management and Control function in this company. Actually, the Vice President, with over four years broad experience in

all facets of the business, has retained the responsibility and exercised direct control over the industrial roofing and construction projects. It is to the credit of the Vice President that, primarily through his efforts and ability, the company has grown rapidly and successfully expanded its operations, both geographically and in its capability to perform diverse industrial roofing and construction work. However, many of the chief problems in the project manager's position have been caused by a lack of delegation by the Vice President and a continuation of "one man leadership."

The business has grown to the point where the stimulation that has been provided for the organization by the Vice President no longer reaches the lower echelons nor is it vital to their daily work. This "single manager" concept of directing industrial projects should have been dropped by the firm, probably in 1962 when it acquired its first major industrial contract. The time is long overdue for the industrial project manager's function to be given the proper status, responsibility, and authority. The most critical personnel decision presently facing the company is the selection of a highly capable, energetic project manager having broad experience in the roofing and construction trades and the finesse and ability to control and direct multiple industrial projects. The proper selection of such a manager will contribute to the stability and authority of the Project Planning and Control function and, at the same time, will allow the Vice President

to concentrate his efforts on the more appropriate broader control aspects of the business. Failure to properly fill this position, and to sufficiently delegate authority thereto, will result in confusion, inefficiency, and increased costs in any contemplated company expansion. Many problems have been encountered in the past in simultaneously handling only three industrial projects. These problems will increase substantially as the company expands and acquires more numerous industrial construction contracts. Unless comparable effort and attention is expended in the industrial project management aspects of the business, the energetic organization of sales, marketing, and other company echelons will be hobbled with the inefficiency and disproportionate costs originating from, and associated with, the incorrect conduct of project planning and control. The importance of this function to the seminar group is evidenced by the lengthy, detailed, proposed job description for the Projects Manager contained in Part I, Chapter II of this report.

2.2 Estimating

Cost estimating used for the submission of industrial project contract bid proposals and other project costing purposes, is presently accomplished by numerous and diverse echelons of the company, including the Vice President, Sales Manager, Sales Engineers, and the Project Manager. Although a standard company estimate form exists, there is little standardization of estimating procedures. In fact, estimates

by different persons on the same job specifications often differ widely. Generally, the details of estimates are prepared as original rough copies on a wide variety of forms, often illegible to other than the originator, and are not smoothed or duplicated. In addition, the Vice President maintains a private set of job cost and estimate cards which contain information, particularly on "extra" work, not readily available to other company personnel. A review of the bids submitted by Skyway Roofing over the past few years indicates that, on an average, very few of those bids that are prepared and submitted are successful. The Vice President annually fills an appreciable portion of a closet with rejected bid folders. If, for no other reason that to improve the number of successful bids and reduce the obvious disporportionate costs and effort associated with the present inefficient estimating methods, a full time Estimator should be hired to fill the job description delineated in Part I, Chapter II of this report.

The preparation of some estimates by industrial Sales Engineers will continue to be justified on the basis of expediency and personal familiarity with a particular job proposal. However, by concentrating the estimating function in one position, the following advantages may be attained:

1. Standardized estimating forms and procedures can be developed.

2. A review authority to detect errors in estimates

can be established.

3. A comparison record of past bid estimates can be maintained.

4. A job costing system can be introduced.

5. The Sales Engineers' time and effort can be devoted solely, and more profitably, to sales and marketing.

The calculation of bid estimates is best based on a man-hours per area basis, since this will remain effectively the same over an appreciable period of time. However, in calculating detailed labor costs, the Estimator should prepare, with the cooperation of the Labor Relations Section, an updated summary of average hourly wage rates and other monetary payments associated with the hiring of union labor in the various marketing areas of the company.

The reverse side of the present company estimate form is merely a lined sheet of paper. This has contributed to the lack of organization and legibility in previous estimate compilations. Page 3-II-8 indicates the outline of a proposed form for the reverse side of the present company estimate sheet. Those items not pertaining to a particular job specification could then be lined out and lined sheets added, as necessary, for minutely detailed calculations. Estimates on "extras" should be calculated on separate, detailed estimate sheets.

Some contracted jobs exceed estimated costs in particular elements of the original bid estimate and are associated with high overhead costs (an average of 22% of Skyway's

total project costs). The maintenance of a job costing record (data to be provided by accounting) and a running comparison of actual and estimated costs by the Estimator will contribute to higher accuracy of future estimates and may indicate poor performance on the part of project personnel which has contributed to estimate variances.

ESTIMATE DETAILS
(Proposed Reverse Side for Skyway Estimate Form)

LABOR	MAN-HRS/ UNIT AREA	TOTAL AREA/ TOTAL MAN-HR	COST MAN-HR	TOTAL COSTS
LABORER				
METAL WORKER				
MACHINE DRIVER				
HOT FEED MAN				
MOP MAN				
ROLLER CART MAN				
KETTLE MAN				
FOREMAN				
MONOFORM SPRAYER				
ENGINEER				
SET-UP				
TEAR DOWN				
BROOM SWEEP				
SNOW/WATER REMOVAL				
FELT LAYER				
FELT FEEDER				
REPAIRS				

MATERIALS	UNIT	UNIT COST	TOTAL UNITS	TOTAL COSTS
FELT				
ASPHALT				
MONOFORM				
FLASHINGS				
EXPANS. JOINT				
CANOPIES				
INSULATION				
PITCH BOXES				
SCUTTLES				
FASCIA				
VENTSLEEVES				
COPING				
NAILS				
COPPER				
SOLDER				
SIDING				
GUTTERS				
STACKS				
LEADER PIPES				
DRIVE SCREWS				
GROMMETS				
BOLTS				
ASBESTOS SEALS				
FASTENERS				
DRAINS				
GAS				
MOPS				
MOPYARN				
SHEETING				
WELDING				
ASBESTOS CEMENT				

(continued)

(continued) next page

MISCELLANEOUS COSTS	AMOUNT/UNIT TIME	TOTAL COSTS
FREIGHT		
CARTAGE		
BONDS		
INSURANCE		
TAXES		
CARFARE		
ROOM AND BOARD		
SPECIAL EQUIPMENT		
SUPERINTENDENT COSTS		
TELEPHONE		
TOLLS		
GASOLINE		
WELFARE FUNDS		
EQUIPMENT USAGE		

SUMMARY TOTAL COST:

2.3 Engineering

The engineering function for industrial roofing and construction projects, mainly conducted simultaneously with the estimating process, is presently accomplished by the Vice President, Sales Manager, Sales Engineers, and the Project Manager - primarily at the home office on the basis of job-specifications, blueprints, contract proposal drawings, architect's drawings, or "extra" work specifications. Although the Sales Engineers may be required to do some engineering analysis for the sake of expediency on some job contract offers, the primary responsibility for preparing engineering analyses, and for reviewing and approving externally prepared analyses, should be delegated to the Projects Manager.

Inaccurate and careless engineering analyses have caused poor estimates to be prepared and submitted, the addition of unexpected additional costs during the progress of project work, submission of claims against Skyway for violation of contract terms, and additional conflicts with general contractors and other business firms. Infrequent, superficial engineering analyses were observed during the period of this study.

Although the roofing and construction work performed by Skyway is not overly complex and technical in nature, it is most important that the prior engineering for this work be properly conducted in order to attain maximum company profit

per project. Since the reputation and profitability of Skyway will depend, to a large degree, on detailed, accurate performance of engineering analyses, on which bid estimates will be based, it is imperative that the Projects Manager be highly experienced in the roofing and construction trades and the engineering aspects thereof.

2.4 Job/Project Management and Control

As noted in detail in Section 2.1 of this Chapter, the industrial project management and control function of Skyway Roofing has been characterized by instability, lack of authority, and disorganization. At this writing, the Vice President still retains most of the authority and exercises the majority of direct control over the industrial roofing and construction projects. In addition, the Projects Superintendent and the Project Foremen receive directions and information from numerous company echelons, including the nominal Project Manager, the Sales Engineers, the Accountant, and the Purchasing Agent. Consequently, a breakdown in communications often occurs. For example, a "blow-off" of approximately 10,000 square feet of roofing occurred one Thursday night and the Project Supervisor and the Vice President were not informed until Saturday morning. Project status conditions and other reports are often received by echelons of the home office without a subsequent relay and exchange of information withother concerned factions. There is no common project status board, file folder, or progress chart maintained

on which to record project changes and information.

Although Skyway insists that it does not desire to establish a "paper work empire," the industrial project management section is sharply reduced in efficiency because of an existing meaningless jumble of records, file folders, and papers. At least four separate folders, located in various sections of the company, were being maintained simultaneously on one project. Three supervisory employees spent an entire afternoon sorting through disorganized, often illegible, records and papers in an attempt to compile a project status report. Since these status reports are the basis for "demand for payment" funds from the general contractor, and are often inaccurate, the general contractor often delays in forwarding the requested funds.

The importance to Skyway of properly accomplishing the industrial project management and control function cannot be overemphasized. A serious loss in just one major industrial project more than offsets the gains made in numerous home improvement jobs. It is to the credit of the company, however, that it has continued to show a profit despite such apparent disorganization. If the contemplated expansion of company activities is to be successful, the project management function must be, and can be, accomplished in a more stable, organized manner.

One of the first actions required to better the industrial project management and control function is the

improvement of the Projects Manager's office to include adequate files, office equipment, and wall space for the placement of line-of-balance and progress charts. The present home improvement Expeditor could also use these same facilities, until further company expansion is accomplished, to assure maximum coordination between the two major corporate divisions in the use of men, materials, and equipment.

The most important action to be taken is the hiring of a mature, capable project manager having broad experience in the roofing and construction trades and the ability to manage numerous industrial projects. Then the Vice President should, after a suitable indoctrination period, delegate the responsibility and authority for project management to this individual.

Next, the Projects Manager should indoctrinate, train, and supervise the Projects Superintendent and Project Foremen, being certain to establish and maintain direct lines of communications between himself and his subordinates.

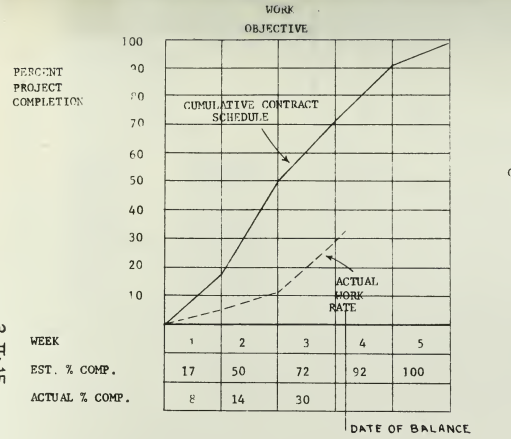
Finally, the Projects Manager should carry out the duties and responsibilities of his job as listed in Part 1, Chapter II, of this report.

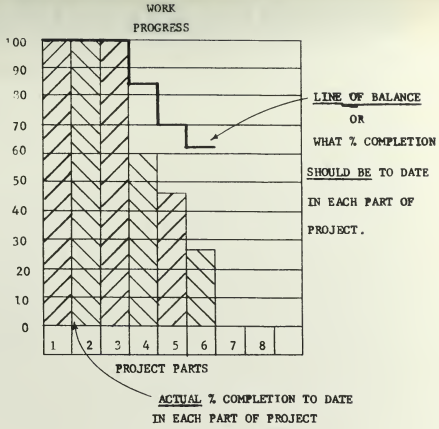
The line-of-balance chart and cumulative cost graph (See Page 3-II-15 and Factory Magazine of July 1961) will enable the Projects Manager to see at a glance the current completion status and comparative costs of the various elements of each project. The progress chart, Page 3-II-16, will allow

the Projects Manager to keep a cumulative record of project costs and progress and the status of "extra" work projects. A comparison between the line-of-balance chart and the progress chart should reveal the reasons for work delays and any excessive accumulated costs.

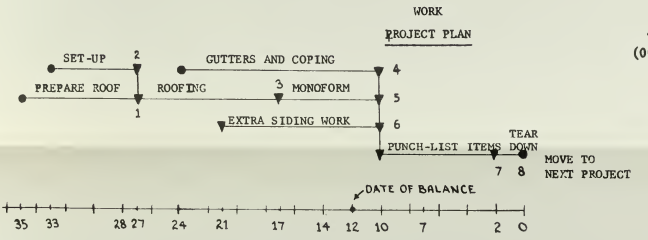
The maintenance of properly organized project job folders will assist the Projects Manager in compiling data for required reports and the planning of future projects. Only through the use of these, and other suitable management techniques, can the Projects Manager efficiently manage and control multiple industrial projects.

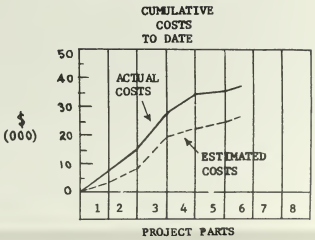
2.4.1 Line of Balance Chart and Cumulative Costs Graph (For illustrative purposes only).





DATE OF BALANCE:	14 JUNE 1964
CONTRACT COMPL. DATE:	26 JUNE 1964





PROJECT: ATLANTIC CEMENT JUNE 1964 (FOR ILLUSTRATIVE PURPOSE ONLY)

ORIGINAL CONTRACT WORK			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
CONTRACT COMPLETION DATE																																
ESTIMATED WORK COMPLETION DATE																																
WORK DAYS LOST					ϟ B.O.	ϟ	"B" N.R.	"B" N.R.							ϟ G.C.	U														
% WORK COMPLETION			0	0	0	0	5	9	12	17	22	25	28	28	28	34														
CONTRACT SURFACE RELEASE DATE	A	MAIN PLANT																												
	B	WAREHOUSE																												
	C	SIDING																												
ACTUAL SURFACE RELEASE DATE	A	MAIN PLANT																												
	B	WAREHOUSE																												
	C	SIDING																												
NO. OF CREWS ON JOB	A	MAIN PLANT	0	0	0	0	4	4	4	3	4	2	2	0	0	4														
	B	WAREHOUSE	0	0	0	0	0	0	3	3	2	2	3	0	0	3														
	C	SIDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0														
ESTIMATED COSTS		LABOR	0	0	7	9	12	15	19	22	25	28	31	35	39	43														
		MATERIALS	0	0	17	20	23	26	34	41	46	51	55	60	65	70														
ACTUAL COSTS		LABOR	0	0	.5	.5	10	12	14	17	21	25	29	29	29	34														
		MATERIALS	0	0	0	0	20	22	31	39	45	50	56	56	56	62														
SPECIAL MATERIALS		ORDERED																												
		NEEDED AT JOB																												
		DELIVERED																												

("EXTRAS") CONTRACT COMPLETION DATE																																
ESTIMATED COMPLETION DATE																																
NO. OF CREWS ON JOB			0	0	0	0	3	2	2	1	2	1	1	0	0	3																
% WORK COMPLETION			0	0	0	0	5	8	10	12	16	19	21	21	21	30																
% OF TOTAL EST. COSTS			0	0	0	0	12	16	19	22	28	32	36	37	38	45																
SPECIAL MATERIALS		ORDERED																														
		NEEDED AT JOB																														
		DELIVERED																														

KEY:

ϟ - WEATHER

N.R.- SURFACE NOT RELEASED

U. - UNION PROBLEM

"B" - WAREHOUSE

* - DATE TO WHICH CHART IS CORRECTED

$ - CUMULATIVE IN $(000).

B.O. - BLOW-OFF

G.C. - GEN'L CONTRACTOR TROUBLE

·→? - PROBABLE DELIVERY DATE

NOTE: WORKED SUNDAYS, 7 AND 14 JUNE, TO CATCH UP ON DELAYED PROJECT WORK

2.4.2. PROJECT PROGRESS CHART

3-II-16

PART 4

SKYWAY, INC.

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PART 4

SKYWAY, INC.

Skyway, Incorporated is the portion of the present Skyway enterprise which is the direct outgrowth of Skyway Roofing, as established in 1948, see Part 1, Chapter I. Its pattern of operations has been one of continuing change. There has been a rapid shifting and expansion of objectives, personnel, business locations, and variations in the types of endeavors undertaken. Presently, this non-union corporation is expanding rapidly in geographical area covered, in the number of employed personnel, and in the types of services offered.

As detailed in Part 1, Chapter II, original investigation of Skyway, Inc., disclosed definite objectives to diminish the remodeling work and to expand the siding and roofing activities and to restrict its operation within approximately a fifty mile radius of the home office. Within the last few weeks, actions of the company have altered these intentions.

CHAPTER I

SALES

1.1 General

Skyway, Incorporated, as indicated by recent advertising, will contract to accomplish, in the residential

or small commercial areas, repairs, additions, improvements, siding and roofing installations. Sales are limited to residential and small commercial areas to avoid any requirements to utilize union members and their characteristically high wages. This policy is not peculiar to Skyway, Inc., but is used by all companies engaged in a similar type and size of contracting.

Expansion is the key word within Skyway, Inc., at present. The original objective of Skyway, Inc., was one of local operations. These local operations have expanded in siding and roofing jobs while de-emphasizing home additions and inside remodeling. Present plans include expansion where geographically and contractually feasible.

Expansion plans include the opening of branch offices in the following geographical areas:

Johnston-Gloversville, New York
Glens Falls, New York
Poughkeepsie, New York
Pittsfield, Massachusetts
Springfield, Massachusetts
Shushan, New York

The Shushan office was opened in late May 1964 as a test site with the extension of the plans calling for the closing of the Shushan branch, when and if, the Glens Falls branch opened. The Glens Falls branch is presently scheduled to commence operations about May 15, 1964 at which time the

Shushan office will be closed and the leased site will be used either as an advance storage area or closed if the lease can be broken. Negotiations are under discussion to open the Johnston-Gloversville offices, with other branches to be activated as soon as possible. The Springfield branch is to be the last branch opened as plans for this office are not, as yet, firm.

These new offices will not be advertised or listed as Skyway, Inc., but will be established under the name of Skyway Roofing. This possible subterfuge illuminates what may have been the original reason for opening these branch offices. In industrial bidding, where union contracts must be considered, mileage costs may be considerable as they must be paid from the nearest office of the company to the location of the job. If the job is in the jurisdiction of another union local, where there is no branch office of the company, mileage costs are computed and paid from the local union office to the job. By establishing these remote branch offices under the name of Skyway Roofing, these mileage costs can be reduced such that company industrial bids may be competitive with more favorably located companies. This industrial phase will ultimately be conducted by the Skyway Roofing Sales Engineers responsible for the particular area. At the same time, Skyway, Inc., will have, in the same office, a Branch Manager who will conduct business not of the industrial type. Therefore, should the non-industrial side of the operation

fail to be profitable, it would have nevertheless paid for itself in savings in the industrial area. Present policy for these branch offices, however, overshadow this original reasoning. Based on estimated contractual prospects in the geographical areas of the branches and the vastly increased amount of business in the Troy area, which is believed to be a direct result of increased sales vigor and the rational use of the recently augmented sales force, present planning is for these branch offices to not only meet expenses, but to appreciably supplement and enhance the profit prospectus of the entire Skyway enterprises.

Contractual expansion plans differing from those originally quoted include such things as interior painting, garages, additions, patios, masonry, see Part 2, Chapter I, Section 1.6. Advertising efforts have also been increasing. Originally, the company intended to limit contractual plans to roofing and siding with a decreased advertising effort. This policy change can be attributed to the realization of the potential market available in the home improvement field and a parallel effort to maintain stability of workforce and enhance thereby company loyalty. If contracts were limited solely to roofing and siding, the work load and therefore the size of work force, would be subjected to variations due to fluctuations in available contracts of this limited nature. With acceptance of a wider variety of work types, these variations can be smoothed by proper scheduling.

1.2 Sales Manager

This position has only been very recently established in Skyway, Inc., as past operational procedures and the relatively few salesmen employed, made such a control position unnecessary. However, with the expansion of the role of Skyway, Inc., the hiring of additional salesmen and an attempt to put operations on a more planned and more secure basis, especially with the opening of outlying branches, the requirement for central control and policy development was deemed necessary and desirable.

The Sales Manager is in a line position and directly responsible to the General Manager, Skyway, Inc. As such, the Sales Manager's authority and responsibility is overall coordination of Skyway, Inc. All Branch Managers report to him for all matters concerning their branches. His duties also include interviewing, hiring and the training of Salesmen and Branch Managers. To provide incentive for these responsibilities, he receives, in addition to a base salary, a percentage of sales of all branches. Much of his time will be spent at existing branches to aid where possible and assist in their operations. In addition, he will directly supervise the establishment and staffing of new branches.

1.3 Branch Managers and Salesmen

The duties of the Branch Managers include coordination of assigned Salesmen, approval of sales estimates made by Salesmen, and writing of all contracts. They will also,

time permitting, be personally involved in selling. All telephone contacts, not a result of previous Salesmen's contacts, are referred to the Branch Manager. He then decides whether to personally follow up, and thus receive the commission on the sale, or refer it to one of the Salesmen. His salary includes a percentage of sales made by all assigned Salesmen plus a direct commission on his own sales.

The Branch Managers are hired by the Sales Manager while the Branch Manager hires his own people. The staffing of each new branch office will initially be limited to include the Branch Manager and a small sales force and office staff. Operational expenses of the branch offices will be assumed by the central office.

Branch Managers will write and approve all contracts effected by their personnel up to a monetary limit yet to be determined. Large jobs above this arbitary limit will be forwarded to the central office for approval.

The Glens Falls Branch will be larger than originally expected. This is a result of operations already started in Shushan. Personnel employed in the Troy Branch include four Salesmen and the Sales Manager who is presently filling, in addition to his own billet, that of the Troy Branch Manager. This branch has been assigned, but is not strictly limited to, the following local areas:

Albany

Schenectady

Troy-Waterford-Cohoes-Watervliet

L. J. Colangione also uses the Troy office as his headquarters but his position is somewhat unique in that he works singly and is more or less independent of the remainder of the sales force.

The Glens Falls Branch has a Branch Manager, a Secretary and two Salesmen. Two additional Salesmen are expected to be hired very shortly.

The policy to date has been to hire only Salesmen experienced in the industry in the geographical area in which they are to sell. Applicants for Salesmen positions, as well as the Branch Manager positions, have been sought via advertisements in newspapers in the various areas. Interviews are conducted and personnel selected based on the results of these interviews. Selection criteria do not appear to be definitive and seem based primarily on past reputation and the interviewer's general impression of the candidate.

After selection and hiring, the new Salesman is brought into the central office to become acquainted with the company. As the Sales Manager and three of the present Salesmen were hired simultaneously, this briefing or training function was accomplished informally by the Vice President and a staff assistant in conjunction with others in the central office. Firm training procedures for future Salesmen have not as yet been established or formalized.

Salaries of Salesmen, prior to the present expansion,

had been based on a set weekly rate. Accompanying the expansion was the institution of a complex, sliding scale, percentage of sales wage system. The system is designed as a sales incentive motivator and can be described basically as follows:

1. A minimum salary is established, which is rather low, and is guaranteed regardless of sales volume. As the dollar volume increases the basic salary increases in set steps until a maximum, based on a very high volume of jobs, is reached. The volume base is yearly sales, and total sales volume is examined quarterly. The next quarter base is determined from a forecast established on that year's past performance.

2. A percentage of each sale is paid in addition to the basic weekly salary. This percentage decreases as each individual sale value increases. That is, it is highest for a low value sale and lowest for a high dollar value sale. The percentage is based on sale value and not cost of job value. Thus, if a Salesman sells a large quantity of low dollar contracts he will make considerably more than if he sells a few large value contracts. Additionally, if a Salesman sells over a certain total for a year, a percentage bonus is added at the years end. To stablize Salesmen's earnings, 70% of the commission is paid when the contract is signed and 30% withheld until the job is completed. From this 30%, any necessary penalties are taken. The end of year bonus is also

paid in weekly increments over a period of 3 months.

3. A penalty system has also been incorporated for those instances where a Salesman makes a contract for a price that is disporportionate with cost. This is also a sliding system and the percentage penalty depends on how poor the estimate proves to be when compared with the actual cost of the job.

4. The system pays liberally for vigorous Salesmen. For approximately $100,000 in sales a Salesman can attain a yearly salary of about $15,000 to $17,000. However, few will actually reach this level.

5. The major disadvantage in this system is the apparent enormous burden it portends to add to the accounting section. Also, the individual Salesman will find it difficult to accurately determine what his pay check will be. Contrary to the latter, however, all Salesmen seem heartily in favor of the system.

Branch Managers are to be paid based on the same system. Thus, the expense of maintaining these branches will be comparatively low as the base minimum is very low and the fixed expenses of the branch will only consist of office rent, storage space, and telephone. These expenses are negligible as the space required need not be based on aesthetics but rather on utility and is as low as $45 per month in Shushan with the low base salary about $55 per week. These expenses can easily be absorbed if Skyway Roofing sales in the various

areas meet expectations. Hence, the company visualizes that the branch offices cannot possibly lose money and any Skyway, Inc., sales made are considered as added profits. In addition, other benefits will be realized in spreading the company name and building local acceptance of Skyway in the various areas.

1.4 Selling

Selling is based on effectiveness of advertising, the satisfaction of previous customers, referrals and the personal efforts of the salesmen. Advertising is covered in Section 1.6, Part 2.

Skyway derives a great deal of its business from referrals and previous business customers as a result of quality workmanship. The company believes that future business depends to a large extent on good reputation resulting from past business. This reputation is enhanced due to the policies of liberal credit and collections only after the customer is completely satisfied with the work done. In fact, these liberal policies may well have been carried to the extreme since the accounts receivable have accumulated to an excessive value.

The remainder of the selling is done by "door-to-door" efforts of the Salemen and by phone calls, particularly after local storms. These post-storm phone calls are so numerous that it is not possible for the present staff to process them. With the added sales force this problem may well be lessened. The problem here is potentially twofold in nature:

1. Many customers ask for L. J. Colangione and will accept no other Salesman.

2. The Branch Manager may personally close all the sales or else equitably distribute them between the remaining Salesmen. Phone contacts initiated by the customer are considered as almost sure sales where others initiated by the Salesmen are not.

1.5 Market Research

Management is contemplating the utilization of one "prime name" in the kinds of products installed. This means one brand of roofing shingle, one brand of insulation, one brand of siding, and so on through all the materials required. The reasons which have prompted this consideration are an attempt to realize savings in ordering large quantities. Contract guarantees could also be simplified since uniformity could be realized. In addtion, the use of name brands would foster receipt of quality merchandise. Customers more readily would accept the "prime names" associated with various other "good will" type benefits. This "prime name" policy requires extensive examination prior to adoption and must be balanced against other requirements of the company such as cost of storage, larger inventory tie-ups, need for immediate cash which would be less accessible, need for secondary sources of supply, and flexibility in response to customer desires. A recommendation is inappropriate until such time as the volatility of the entire company settles and a firm policy is established.

CHAPTER II

PROJECT MANAGEMENT

2.1 General

As is undoubtedly true in most highly sales oriented companies, Skyway has, until the present time, not devoted sufficient attention to project management. As Salesmen were previously paid on a straight salary basis, once the contract was secured their interest in following up the progress of the job was negligible. Scheduling and assignment has been done on a haphazard basis by various persons. Progress of completion and job costs were not closely followed nor assigned as a responsibility. Suffice to say that these functions were seriously neglected. They were, in essence, accomplished in spite of the system rather than because of the system. This situation is believed to have been allowed to exist because the major interest of management was not in the development or expansion of Skyway, Inc., but almost wholly in Skyway Roofing. With the establishment of the positions of Sales Manager, Branch Managers, and the branch organization these functions are evidently to receive the necessary attention. Although not entirely efficient at this time, the new central organization promises to aid materially the functioning of the overall operation.

A detailed description and analysis of the previously used methods of project management would serve no useful purpose other than to lend credence to criticisms of that system.

Hence the descriptions that follow are of the present planned and recommended methods.

2.2 Estimating

Assuming that customer and Salesman have made contact and that the customer has conveyed his desires to the Salesman or the Salesman has convinced the customer to purchase, it becomes necessary to quote a price to the customer. This price or estimate cannot be so high as to cause the customer to negate the sale nor so low as not to meet company expectations of profit. Skyway, Inc., has taken two steps to attempt to ensure that neither of these extremes occur.

The first safeguard was described in the sliding pay scale system of the Salesman wherein 30% of the Salesman's commission is withheld until the job is completed and adjustment made for inordinate estimates. This penalty/reward pay system functions to prevent the Salesman's estimating too high as he will lose sales and thus lower his base scale or too low and thus curtail his commissions.

The second safeguard is the education of each Salesman in the company estimating guidelines. There are recommended prices in these guidelines for all the types of jobs which may be contracted for, as well as for various grades within types. The Salesman, who generally makes estimates on the spot, can go over or under these guides as he deems possible or necessary when making the sale. If he can sell over, his commission will be larger but he must be careful not to sell

too high or the reputation of Skyway, Inc., will suffer and accordingly, hinder future sales possibilities. If he must sell under to close the sale his commission will be less, but a sale with a little less commission is often better than no sale at all. The guides do, however, list a price below which the sale is not to be closed.

The guidelines are furnished in terms of squares of roofing, square feet of siding, square feet of patio, square feet of paint, etc., and includes cost of materials, overhead, and burden, as well as providing for commissions and profits. To make the actual estimate the Salesman measures the requirements of the job, multiplies by the recommended price and quotes an estimated price. He then adjusts as necessary or desirable to close the sale. Of course, for larger contracts such as garages, large additions, remodeling, etc., the Salesman will record the requirements of the customer and return to the office for detailed costing. These large jobs often entail installation of specified types of products, the costs of which the Salesman ordinarily will not have readily available. Also, if such things as wiring, plumbing, etc., are required, which Skyway must sub-contract, the Salesman, of necessity, must determine the cost of the sub-contract before he is able to quote an overall price. The requirement for detailed layout and pricing of such contracts will decrease as the experience of the individual Salesman increases.

The policy, heretofore, once the estimate has been made, was for a contract to be prepared by the office and mailed to the customer with no further action taken until the signed contract is returned, again usually by mail. It is recommended that this policy be abandoned and that contracts, once prepared and approved by the Branch Manager, be delivered to the customer by the Salesman so as to show interest and to be available to explain the contract and answer questions. Such a policy should increase the number of closed sales and decrease the time between contract issuance and acceptance. This would, also, ease the scheduling problems. Also, if the contract is not signed at this time, the Salesman should leave his card and a stamped, addressed envelope with the customer in order to facilitate the return of the contract and contact with the company. Additionally, the Salesman should periodically check with the customer to determine if the sale will or will not be closed Care must be exercised here, however, not to antagonize the customer.

As the estimating guidelines, in fact, establish company policy in relation to contract pricing and thereby govern, to a large extent, the commissions earned by the Salesmen, management must be continually cognizant of the market and the soundness of these guidelines. It is recommended that a committee composed of the General Manager, the Sales Manager, appropriate Branch Manager, and advised by the Purchasing Agent, and Cost Control personnel review and adjust, as

necessary, these guides at least semiannually and preferably quarterly.

2.3 Engineering

Engineering, in the strict sense, is not often necessary in the type of jobs contracted for by Skyway, Inc. For such jobs as roofing, siding and painting, the engineering is largely accomplished mentally by the Salesman when he makes his estimate. Elaborate plans are unnecessary and the problem resolves itself to sending workers to the right place with the right materials with the appropriate instructions. This can be accomplished by coordination between the Salesman and the Expeditor in each branch office. The details of this coordination will be discussed in a subsequent section of this chapter.

Basically then, engineering in Skyway, Inc., will consist of the interpretation of the contract to determine what materials in the appropriate quantities are required at which jobs and providing this information to Purchasing and Scheduling. However, for the more complicated jobs such as additions, garages, patios, etc., the problem is complicated slightly depending on the elaborateness desired by the customer. Use of standard plans, to which the customer has agreed, however, serve to lessen the difficulties. Also, most experienced carpenters are able to install dormers and additions and build garages without plans and need only the dimensions desired.

Additionally, on those jobs which require a number of men and closer supervision, a working Supervisor will be assigned who will have been sufficiently briefed and provided with plans to ensure satisfactory completion. Again, however, these types of jobs are basic standards and the only engineering necessary will be instructions by the Salesmen directly to the workers assigned or to the Expeditor who will in turn instruct the workers as to the deviations from the basic standard.

2.4 Job/Project Management and Control

As has been stated earlier, the actual job management and control throughout Skyway is characterized by its disorganization. This was, or is, particularly true of Skyway, Inc. Job scheduling, worker assignment, materials scheduling, and job inspection and/or follow up was conducted by various personnel. The company recognizes that there is a definite requirement for some centralization of control of these functions. Such centralization will not only allow all concerned to more effectively complete their assigned tasks but should, more importantly, act to ensure successful and timely completion of contracts. The establishment of the position of Expeditor is deemed the organizational solution to the control need.

As the type of jobs undertaken by Skyway, Inc., usually are completed in two to three days, or a week at most and, in general, plans are not used, it is a vital necessity that there be cooperation between Salesmen, Expeditor, and

workmen. Additionally, contracts written by the Salesman and Branch Manager must be explicit to the degree that the Expeditor can determine types and amounts of materials required.

Once the contract is approved by the customer and returned to the company, the Expeditor should establish a file for that contract. The Salesman responsible for the contract must then be contacted and the Salesman and Expeditor will jointly discuss the particulars to ensure complete understanding of the project by the Expeditor. These particulars must become a part of the Expeditor's file.

The Expeditor then determines, by consulting his schedules, the most appropriate date to commence work. This scheduling must consider the availability of men and material, if weather need be considered, if sub-contracting is required, and the desires of the customer. These desires should be confirmed with the customer via telephone. Agreement with the customer on a starting date should be reached.

The Expeditor must then notify Material Control of material requirements and dates required. The cost of these materials must become a part of the file of the Expeditor as must the costs of any additional materials utilized. These records will be used in the cost control function and a record of estimated costs versus actual costs will become a part of the completion report that will be provided the Branch Manager.

When the date of commencement of the job arrives,

the Expeditor gathers the workmen who were assigned to the job, and notified by the Expeditor the night before, if practicable, and briefs them on the job. If the job is of sufficient size to require a Supervisor and detailed plans, the Supervisor is given the plans at this time and effectively briefed.

Material Control, via a reminder memo noted the preceding day, has provided the necessary material and vehicles and the workers then proceed to the job. The Expeditor, if the job is large enough to warrant it and if time permits, may make a check at various times during the conduct of the work to ensure satisfactory progress of the job. The lead worker or the Supervisor will inform the Expeditor at the end of each day as to the progress for the day and any requirements for the following day not already planned for. Also, this progress information will include, when applicable, a statement as to whether the job will be completed on the following day.

The Expeditor will maintain a file of workers assigned and hours worked which shall be forwarded to Accounting at the end of each week. Also, the actual labor charges will be compared to estimated charges, again for cost control purposes, and forwarded as a part of the completion report to the Branch Manager.

If a job will be completed on the following day, the responsible Salesman shall be informed so that he will call on

the customer at completion time to ensure satisfactory completion of the job and to have the customer sign an acceptance agreement. This procedure should greatly decrease call back requirements and delay of payment for alleged non-satisfactory job completion.

Should disagreement arise during progress of the job as to what is supposed to be done or additional work requested, the Expeditor will notify the Salesman who will handle the problem or, should the Salesman be unavailable, handle it himself. In those instances where the Expeditor handles the problem, he must immediately notify the Salesman so as not to cause a lack of agreement in prices, contracts and resultant commissions.

The Expeditor should maintain a status board which displays job progress, both estimated and actual. Should jobs lag scheduled dates, the Expeditor will take necessary action to speed up, re-schedule, or assign more personnel. The line of balance schedule outlined previously in Section 2.3.1 of Chapter II to Part 1, can be easily adapted to this function.

The Expeditor must furnish the Branch Manager a completion report upon the completion of each job. This report will include all estimated costs, all actual costs, problems encountered, customer comments, if appropriate, and any other information deemed necessary. The Branch Manager is then able to evaluate the Salesman's estimating accurateness, effectiveness of scheduling, and material control procedures.

He can use this data for better coordination of his branch and to provide necessary information for his weekly report to the Sales Manager.

The system recommended herein should greatly increase the effectiveness and efficiency of the operations of Skyway, Inc., while reducing to the necessary minimum the cumbersome paper work procedures presently used.

PART 5

SUMMARY AND RECOMMENDATIONS

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PART 5

SUMMARY AND RECOMMENDATIONS

SUMMARY COMMENT

The Skyway Company is a well established, family-owned firm presently doing business under a "single manager" concept of direction and control. Originally founded on a home roofing and improvement basis, the company has enjoyed a recent profitable expansion into the industrial construction and roofing trade. The success of this expansion is primarily attributable to the company's adoption of modern roofing techniques, coupled with an aggressive sales effort.

The majority of the Skyway personnel are capable and knowledgeable. The company is, however, experiencing difficulty in properly filling certain key positions. Employee satisfaction is low, due primarily to a lack of delegation by an authoritarian owner-manager. In addition, the daily conduct of the business is seriously hampered by organizational defects and the absence of standardized policies and procedures.

The company has great potential for further successful growth and expansion, particularly if its weaknesses in organization, personnel, and accounting procedures are properly rectified. The present large investment in company-owned assets and the administrative and coordinative capacity of the home office staff should easily support a much larger

volume of business over a wide geographic area. Although the division of company activities into two categories of work crews is reasonable and necessary for profitable operations, further experience and education in labor relations is vital to future success.

Rather than aggressively pursuing an overly rapid, variational type of expansion, the Skyway management might more profitably expend its energy and efforts now in a systematic attempt to correct critical company weaknesses and to establish a firmer base for future growth. The following summary of primary recommendations is offered as a possible contribution to such corrective action and to the future prosperous growth of Skyway.

RECOMMENDATIONS

The numbers in parentheses indicate the page on which the particular recommendation is amplified in this report.

Organization

1. Familiarize all Skyway personnel with the objectives and goals of the company. (1-I-6).

2. Adopt and promulgate a company organization chart and related job descriptions. (1-II-9).

3. Provide for more delegation and decentralization of responsibility and authority. (1-II-1).

4. Formalize company policies and procedures. (1-II-4).

Personnel

1. Institute a personnel administration program designed to provide more individual job satisfaction by clearly defining areas of responsibilities and limits of authority. (2-I-1).

2. Place personnel record keeping under a personnel manager. (2-I-4).

3. Provide an opportunity for all salaried employees to participate in group insurance coverage. (2-I-12).

4. Provide a more liberal vacation policy.

Labor Relations

1. Highest management examine their attitudes toward the unions. (2-I-8).

2. Establish in the home office a functional position, Labor Relations Manager, wherein one person will have the responsibilities for being completely familiar with labor agreements in all areas. (2-I-11).

3. Thoroughly indoctrinate supervisory personnel in company labor relations policies. (2-I-11).

Insurance

1. Conduct an analysis and review of the company insurance program to effect cost savings and reduce gaps and/or overlaps. (2-I-12).

Contracts

1. Provide for personal delivery of contracts to customers by Skyway, Inc., Salesmen. (2-I-16).

2. Make more explicit the financial terms of contracts. (2-I-16).

Legal

1. Continue to retain legal assistance in a staff advisory capacity. (2-I-17).

2. Attempt to establish exact legal assistance requirements. (2-I-17).

Advertising

1. Establish separate advertising budgets for Skyway Roofing and Skyway, Inc. (2-I-19).

2. Attempt to evaluate the effectiveness of the direct mailing program. (2-I-19).

3. Endeavor to conduct joint advertising with the Flintkote Company. (2-I-20).

4. Emphasize the preparation and submission of news releases covering Skyway activities. (2-I-21).

Accounting

1. Conduct a thorough financial analysis of all proposed corporate actions. (2-II-8).

2. Establish a separate financial and accounting

system, on an accrual double entry basis, for each of the two corporations. (2-II-10).

3. Establish the credit rating of all potential customers prior to formalization of a contract. (2-II-12).

4. Establish the following Skyway, Inc., credit policies:

a. A standardized cash policy under the terms of 1/3 down with return of the contract, 1/3 on completion and acceptance of the work and the remaining 1/3 within 90 days.

b. If terms under a. are not possible, assist the customer to negotiate financing through a reputable financial institution.

c. Finance the customer's work internally at a fixed percent per month on the unpaid balance after 90 days.

d. Explicitly state credit and payment terms in each contract. (2-II-12).

5. Establish a system of quarterly and annual budgeting. (2-II-13).

6. Standardize cost estimating documentation as a basis for the performance of cost analysis. (2-II-12).

7. Assign to the accountant the responsibility and authority to accomplish routine financial transactions. (2-II-14).

8. Prepare the following reports to assist in the making of managerial decisions:

	SKYWAY ROOFING	SKYWAY INC.
DAILY	Labor report from superintendent to project manager & accounting.	Labor report from scheduler to accounting.
WEEKLY	Direct Labor Summary from Accounting to Project Manager and General Manager.	Direct Labor Summary from Accounting to General Manager.
	Cash balance from accounting to General Manager.	Cash balance from accounting to General Manager.
	Job Cost Summary from accounting to Project Manager and General Manager.	
MONTHLY	Income Statement to management.	Income Statement to management.
	Budget variance analysis to management.	Budget variance analysis to management.
	Balance Sheet to management.	Balance Sheet to management.
QUARTERLY	Quarterly Budget and Income Statements, and Balance Sheets to top management.	

(2-II-13)

9. Document all standardized internal POLICIES and procedures in an Accounting Procedures manual. (2-II-18).

10. Adopt an accrual double entry accounting system. (2-II-11).

Material Control

1. Improve metal shop work place layout. (2-III-3).

2. Rearrange warehoused materials in a more systematic manner. (2-III-2).

3. Employ a full time mechanic and adopt a "preventive maintenance" program for vehicle maintenance. (2-III-9).

4. Maintain operating and maintenance cost data on company vehicles. (2-III-8).

Purchasing

1. Formalize written purchasing procedures. (2-III-5).

2. Provide purchasing with a list of required materials (vice a job description and/or drawing) on Skyway, Inc., jobs. (2-III-4).

Inventory Control

1. Use a seasonal re-order point and re-order quantity for high value materials and a single maximum and minimum point for low value materials. (2-III-7).

Sales

1. Determine appropriate sales goals for Skyway Roofing and for each branch. (3-I-1).

2. Encourage sales competition between branches. (2-I-3).

3. Each branch submit a periodic report listing sales calls made during stated periods. (3-I-4).

4. The Vice President should gradually reduce his direct sales function. (3-I-5).

5. Estimator prepare estimates on all large re-roofing and new construction jobs with sales force assistance. (3-I-2).

Skyway Roofing

(Project Management)

1. Delegate the authority and responsibility for project management to the Projects Manager. (3-II-3).

2. Attempt to hire an experienced, capable individual as Projects Manager. (3-II-4).

3. Establish and maintain a project progress chart. (3-II-14).

4. Improve the Project Manager's work spaces. (3-II-13).

5. Establish and maintain a line-of-balance chart and a cumulative cost graph. (3-II-14).

6. Maintain complete project folders. (3-II-14).

(Estimating)

1. Establish a full time Estimator position. (3-II-5).

2. Standardize estimating procedures and forms. (3-II-6).

3. Maintain a formal record of bid estimates. (3-II-7).

(Engineering)

1. Improve the efficiency and accuracy of engineering analyses. (3-II-10).

2. Centralize the engineering function in the Projects Manager's office. (3-II-10).

Skyway, Inc.

1. Establish and implement a detailed training program for Branch Managers and Salesmen. (4-I-5).

2. Establish a committee composed of the General Manager, the Sales Manager, Branch Managers, Purchasing Agent, and Cost Control personnel to review and adjust the estimating guidelines furnished to salesmen. (4-II-4).

3. Improve Job/Project Management and Control procedures. (4-II-1).

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